RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

PASSENGER TRAFFIC NUMBER **MAY 19, 1952**

RECEIVED
MAY 19 1952
ECONOMICS
SENIOR SERVICE

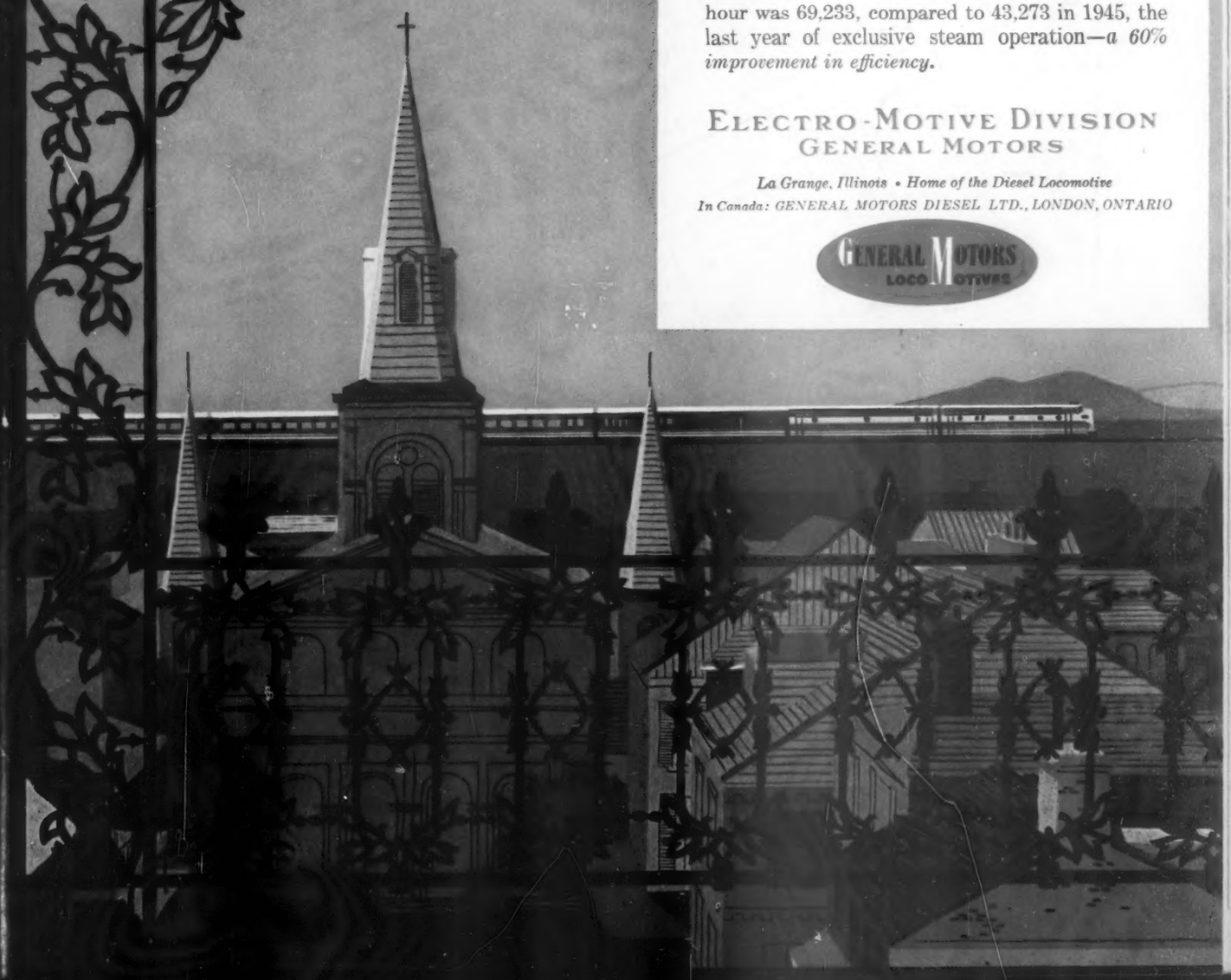
60% IMPROVEMENT!

With General Motors locomotives in the majority, Diesels today are handling all passenger service of the Kansas City Southern Railway and 93% of the freight. In 1951, average GTM per train-hour was 69,233, compared to 43,273 in 1945, the last year of exclusive steam operation—*a 60% improvement in efficiency.*

ELECTRO-MOTIVE DIVISION
GENERAL MOTORS

La Grange, Illinois • Home of the Diesel Locomotive
In Canada: GENERAL MOTORS DIESEL LTD., LONDON, ONTARIO

GENERAL MOTORS LOCOMOTIVES



HERE'S AN ADVERTISEMENT ANY RAILROAD WOULD BE PROUD TO RUN*

Relax...

on RIBBONRAIL when you go to Colossus City

Want the smoothest ride of your life? Then ride one of the trains listed below — You will literally glide for 120 miles.

For the Mid-West Central has installed RIBBONRAIL in every foot of the route.

You'll get a new travel thrill as your train swishes over long lengths of continuous welded rail from which all bumps and clickety-clacks have been eliminated.

Mid-West Central

To Colossus City — Read Down				From Colossus City — Read Up		
No. 230	No. 232	No. 70		No. 71	No. 231	No. 233
8:00 a.m.	2:00 p.m.	4:20 p.m.	Lv. Markersburg Ar.	12:10 p.m.	6:00 p.m.	3:40 a.m.
9:45 a.m.	3:45 p.m.	5:20 p.m.	Lv. Wayboro Ar.	11:25 a.m.	4:05 p.m.	1:40 a.m.
10:45 a.m.	4:35 p.m.	6:00 p.m.	Lv. Mid Town Ar.	11:02 a.m.	2:55 p.m.	12:30 a.m.
12:30 p.m.	6:15 p.m.	7:30 p.m.	Ar. Colossus City Lv.	9:00 a.m.	1:00 p.m.	10:30 p.m.

* Of course, this advertisement is make-believe, there is no Colossus City — no Mid-West Railroad... But in the very near future you'll see a lot of newspaper advertisements like it. And they will be real. Why? Because RIBBONRAIL not only provides smooth riding for passengers, but it cuts track maintenance costs, saving railroads thousands of dollars year after year. There are no joints to wear, no rail ends to batter with RIBBONRAIL.

OXWELD RAILROAD SERVICE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
Carbide and Carbon Building Chicago and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronto

Ribbonrail
SERVICE MARK

The term "Ribbonrail" is a service mark of Union Carbide and Carbon Corporation.

YOU'LL LIKE THESE TRACK BOLTS

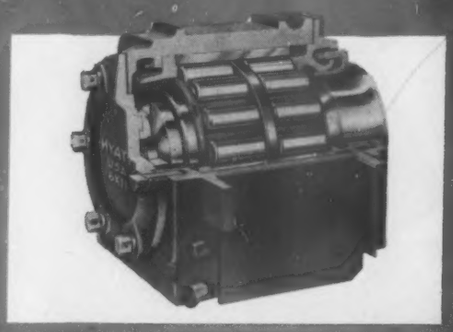
Bethlehem Track Bolts are good, sound bolts, accurately made from tough steel. They have oval necks and rolled threads. Come with accurate square nuts, for easy gripping by hand or power wrenches. They are made in sizes for every weight of rail.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

Bethlehem supplies every type of Railroad Fastener



Standard Hyatt Roller Bearing Journal Box for passenger car application.

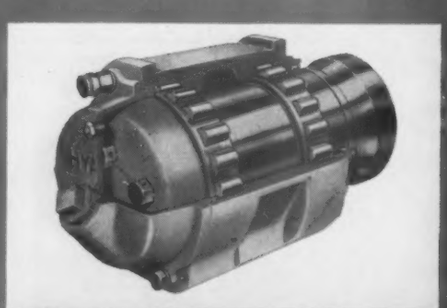
IT'S EASIER WITH HYATTS on PASSENGER CARS DIESEL LOCOMOTIVES and FREIGHT CARS

Hyatt journal boxes are easier to apply, easier to remove, easier to inspect and easier to maintain.

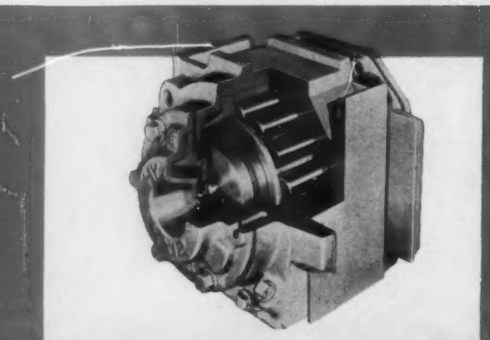
We can quickly demonstrate for you how the straight cylindrical construction of Hyatt railroad roller bearings permits journal box designs that lend themselves readily to simplified maintenance practices.

When you add easy maintenance to the proven dependability, smooth operation and general acceptance of Hyatt Journal Boxes you can understand the ever-growing preference for Hyatts.

For more information about Hyatt Journal Boxes for new or changeover equipment, write to Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.



Hyatt Freight Car Journal Box showing interior construction.



Hyatt Roller Bearing Journal Box with resilient thrust unit as used on the GM Diesel Locomotives.

HYATT ROLLER BEARING JOURNAL BOXES

Vol. 132, No. 20 May 19, 1952

RAILWAY AGE

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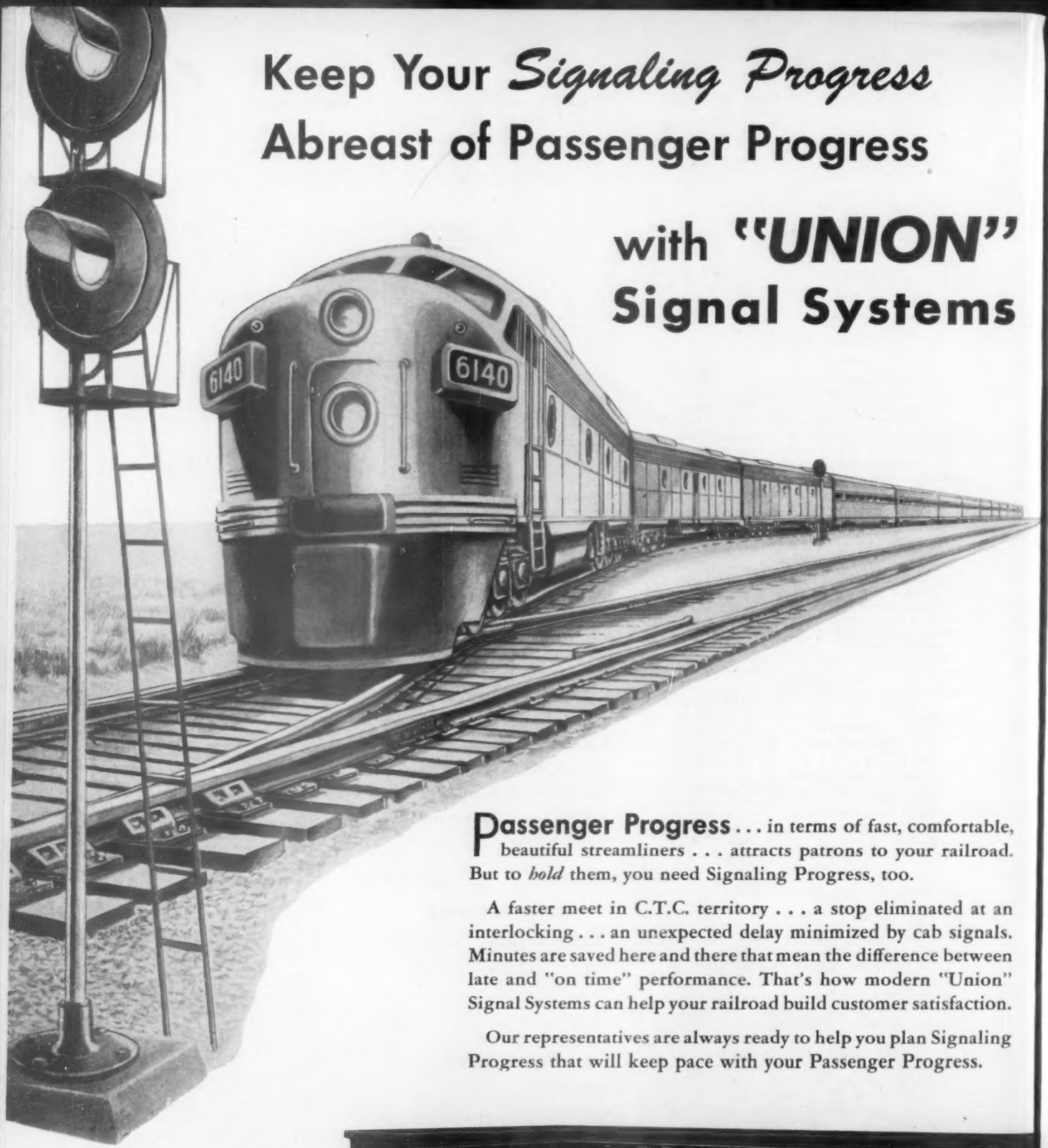
Keep Your *Signaling Progress* Abreast of Passenger Progress

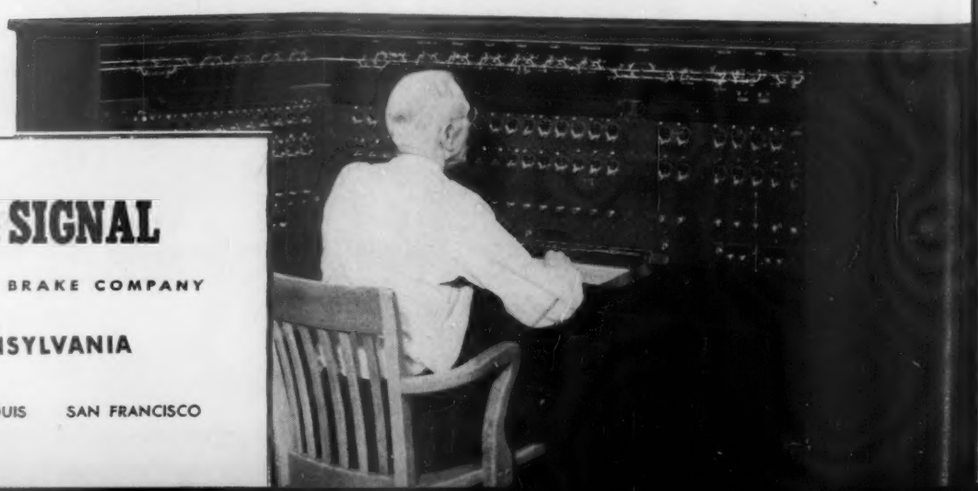
with "UNION" Signal Systems



Passenger Progress . . . in terms of fast, comfortable, beautiful streamliners . . . attracts patrons to your railroad. But to *hold* them, you need Signaling Progress, too.

A faster meet in C.T.C. territory . . . a stop eliminated at an interlocking . . . an unexpected delay minimized by cab signals. Minutes are saved here and there that mean the difference between late and "on time" performance. That's how modern "Union" Signal Systems can help your railroad build customer satisfaction.

Our representatives are always ready to help you plan Signaling Progress that will keep pace with your Passenger Progress.



UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, three months
1952 ..... $2,587,471,939
1951 2,440,285,731

Operating expenses, three months
1952 ..... $2,010,191,343
1951 1,931,462,248

Taxes, three months
1952 ..... $ 316,254,128
1951 282,526,069

Net railway operating income, three months
1952 ..... $ 218,601,209
1951 178,597,152

Net income, estimated, three months
1952 ..... $ 142,000,000
1951 106,000,000

Average price railroad stocks
May 12, 1952 ..... 59.62
May 14, 1951 ..... 55.99

Car loadings, revenue freight
18 weeks, 1952 12,994,960
18 weeks, 1951 13,449,491

Average daily freight car surplus
Week ended May 3, 1952 18,080
Week ended May 5, 1951 8,941

Average daily freight car shortage
Week ended May 3, 1952 2,219
Week ended May 5, 1951 9,738

Freight cars delivered
April 1952 7,403
April 1951 8,274

Freight cars on order
May 1, 1952 108,270
May 1, 1951 155,871

Freight cars held for repairs
April 1, 1952 94,509
April 1, 1951 86,246

Net ton-miles per serviceable car per day
February 1952 1,027
February 1951 964

Average number railroad employees
Mid-March 1952 1,220,658
Mid-March 1951 1,274,156

Passenger Traffic Issue . . .

$1.4 BILLION AIN'T HAY—not in the railroad business anyhow. That's the amount of passenger-train revenue the railroads earned last year. And regardless of I.C.C. formulas or other accounting procedures, a lot of passenger trains make money for the railroads that operate them—make money in the sense that there is more money in the railroad's pocket than there would be if these trains did not run. So the railroads are spending vast sums to make these trains that pay more attractive to customers, with new equipment and service features and convenient schedules; and they are advertising these trains in many media in search of additional patronage. This 1952 Passenger Traffic issue of *Railway Age*, like its predecessors, is devoted to the promotion of passenger travel by rail, emphasizing improvements in facilities and equipment and service, stressing the advantages of the train over other forms of medium- and long-distance travel—particularly the private automobile—and describing important resorts, cities and places of interest in the United States and Canada to which the train is a convenient, comfortable and safe way to travel.

SPECIFIC CASE: Along these lines much significance attaches to the statement: "If our passenger service continues its present pattern of satisfactory earnings we must face the problem of purchasing more new lightweight coaches and sleeping cars, both to keep on top of the business and to attract new traffic," C. M. Roddewig, president, told Chicago & Eastern Illinois stockholders at their annual meeting in Chicago earlier this month. Pointing out that passenger and head-end revenues constituted almost 17 per cent of the company's gross income, he added: "As long as we can run passenger trains and make a little money on them it would be foolish to slough off so important a part of our gross by 'drying up' this service."

FAST TURN-AROUND contributes substantially to the earning power of new and costly passenger trains, and an exceptionally good example of the close figuring and close coordination of activity that make this possible is reported herein, in the form of a practically minute-by-minute account of what goes on in Minneapolis every day when the Burlington's "Twin Zephyr" is turned, freshened up, and serviced, all in 30 minutes.

PASSENGER POLICY has a lot to do with the earnings of passenger trains, and our leading editorial suggests some elements of a forward-looking passenger policy that should serve effectively to create a better political and economic climate for railroad passenger service to operate in—to the mutual advantage of the railroads and their customers.

WEEK AT A GLANCE

WHAT ABOUT THE CAR SUPPLY? In lulls between periods of booming passenger business the railroads have their hands full trying to keep their passenger-train cars moving and earning. But in times of military emergency, domestic gasoline shortages and full industrial mobilization, as recent experience painfully demonstrated, there is not enough seating capacity and sleeping capacity in the railroads' passenger car fleet to meet the demands made upon it. This situation is analyzed, and the venerable age of much existing passenger equipment is emphasized, in the article on page 104 this week.

IMPROVEMENTS in stations and ticket-selling facilities, in communications, in dining car service and food preparation and in many amenities for travelers also are reported herein.

In the Week's News . . .

ROAD DAMAGE by king-size trucks and trailers has been measured by a unit of the National Research Council, and a summary of the findings has just been made public (page 11). Demonstrating the punishing effect of excessive axle loads, the investigation showed a 22,400-lb. load caused over six times as much cracking of a concrete pavement as did an 18,000-load. Truckers will say, of course, that a road "properly" built would support the heavier load, but they don't explain why private auto drivers, whose vehicles have axle loads in the 1,500-to-2,000-lb. range, should have to pay a large share of the excessive cost of the massive construction required to support the terrific load concentrations they would like to be free to dispatch to every corner of the land.

PUZZLE FANS, ATTENTION!—Mrs. William White, wife of the Lackawanna's president, has authored a book which meets a long-felt want, not only in railroad circles but in practically all other areas of the nation's life. It is a Cross-Word Puzzler's Dictionary (published by Vantage Press), giving surcease to weary brains stumped by the four-letter word for "a well dug by Isaac's servants"; and such other tortures contrived by the evil genius of the puzzle-builders.

PROFITABLE PASSENGER TRAINS are no novelty on the Chicago & Eastern Illinois. H. R. Sampson, vice-president—traffic, currently reports all but two runs "in the black" and a fighting chance to make it "unanimous." The road's 1951 passenger operation ratio of 96 per cent (based on the I.C.C. formula) and an even brighter picture so far this year, reflect, at least in part, his 30 years of experience in the passenger field.

MODERNIZED COMMUTER SERVICE may have benefits beyond simply making its patrons happy. Burlington stockholders were recently told by President H. C. Murphy that the road's improved service ($10 million already spent, $3 million more coming up) has brought increased patronage and placed the road nearer to the break-even point insofar as operating costs are concerned. The passenger count jumped 7.76 per cent from 1950 to 1951 while revenues went up even more—9.94 per cent. Said Mr. Murphy: "Even though there is some doubt that any commuter service can be made attractive from a revenue standpoint, we prefer to give an acceptable service and keep our 18,000 daily riders happy."

ORDERS FOR LOCOMOTIVES reported this week include something of a rarity for these days—15 steam switchers which the Norfolk & Western will build in its own shops. . . . April deliveries of freight cars totaled 7,403, further whittling down the backlog. . . . Lyle Richeson has resigned as vice-president of American Car & Foundry to become vice-president of Westinghouse Air Brake. . . . The Canadian National's new 46-mile Kitimat branch in British Columbia is scheduled for completion in 1954.

Ajax

SYMBOL OF THE BEST IN RAILWAY EQUIPMENT

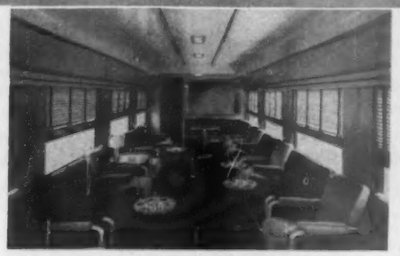
For Passengers—For Railroads —Ajax Equipment makes travel more comfortable, safer and more economical!

Coach & Car Equipment Corporation Dreamliner, Combination Foot-, and Leg-rest Seat

The Ajax Power Hand Brake

has a record of performance and dependability *unequalled* in railroad service. Many exclusive features; world wide acceptance.

ROTO-CLINE and DREAMLINER SEATS



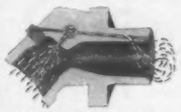
DA-LITE CONTROL BLINDS

Your Road's Best Salesman— *The passenger who arrives relaxed!*

Jenkins' Leather Fibre Dust **Guards**, with the many natural properties inherent in leather, assure better and longer protection to your Journal Boxes.

CONSOLIDATED *AUTOMATIC* BRAKE SLACK ADJUSTER

Easy to install. High brake efficiency and predetermined piston travel. Operates *automatically* whether car is empty or loaded. Compensates for "false" piston travel between empty and loaded cars. SAFETY for employes, cars and lading.



THE SURE-FLO SANDER

is the simplest, most dependable, most trouble free sander ever installed on a steam, diesel or electric locomotive.

Coach & Car Equip't. Corp. DIESEL CAB SEAT

rugged, adjustable — now in use on many railroads.

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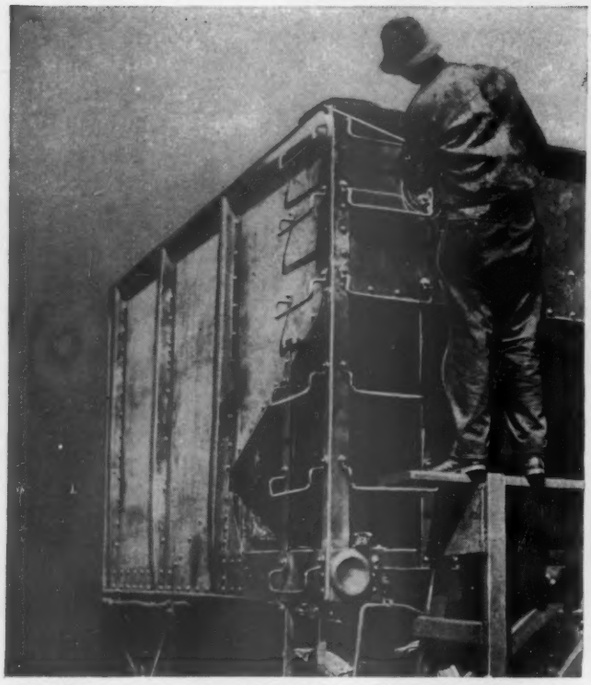
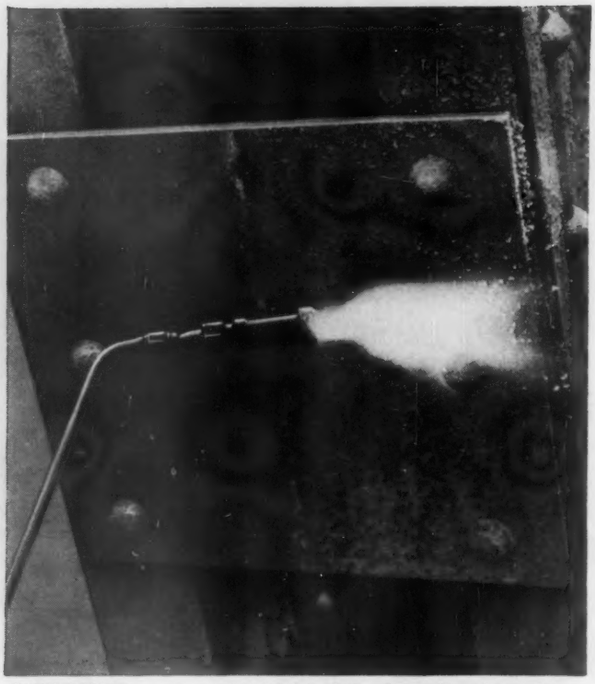


END POST . . . Here, a style 738 Round Bent Tip is used to flame clean the end post of a freight car. This multi-flame tip is ideal for removing scale from corners and around rivets.



BATTEN PLATE . . . on a railroad bridge being flame cleaned with Airco torch. Notice how smooth and clean one half of the plate is . . . how old paint and rust flakes have been completely removed.

flame cleaning

CARS . . . BRIDGES . . . STEEL STRUCTURES CUTS PAINTING PREPARATION COSTS AS MUCH AS 50%

For speed and effectiveness, no other method of preparing steel surfaces for painting comes close to the flame cleaning process. Cost studies made by several leading railroads show that, compared to laborious hand scraping and chipping, cleaning costs are cut by as much as *one-half!*

This Airco process is also used to condition new steel before applying prime coats. Mill scale is loosened and corrosion-starting dirt and moisture eliminated. Surfaces thus prepared reduce costs of future maintenance.

Airco's wide variety of special multi-flame tips make it possible to clean surfaces of practically every contour and size. Learn how you can save with fast, economical oxy-acetylene flame cleaning — get in touch with your local Airco office today.

BEAM FLANGE of a pit-installed track scale is Airco flame-cleaned prior to painting. Using an Airco Style No. 120 Tip, this oxyacetylene process is equally adaptable for cleaning water towers . . . signalling equipment . . . in fact any type of steel railway structure.

Costs come down under the Airco plan

AIRCO

AIR REDUCTION

AIR REDUCTION SALES COMPANY • AIR REDUCTION MAGNOLIA COMPANY
AIR REDUCTION PACIFIC COMPANY
REPRESENTED INTERNATIONALLY BY AIRCO COMPANY INTERNATIONAL
Divisions of Air Reduction Company, Incorporated
Offices in Principal Cities

Findings on Maryland Tests Show How Heavily Loaded Trucks Beat Up Highway

Trucks with loads in excess of 18,000 lb. per axle cause more serious damage to a typical highway than vehicles loaded within that limit, according to the Highway Research Board's findings with respect to the Maryland road tests. The tests were conducted on a 1.1-mile section of U.S. Highway 301, about nine miles south of La Plata, Md., where the pavement is of portland-cement-concrete construction.

The project was conducted under the direction of the board (which is a unit of the National Research Council) on behalf of the highway departments of 11 states and the District of Columbia. The U. S. Bureau of Public Roads was a cooperating agency, while the vehicles, fuels and lubricants used were supplied by truck manufacturers and petroleum companies.

The board issued a May 9 statement which summarized its findings. Those findings "are borne out conclusively by the scientific data taken during the test," the statement said. It added that "a final report summarizing all of the test data and outlining the methods used in their analyses" would be published "in the near future."

The principal purpose of the tests, the board said, was to determine the relative effects of four different axle loads on a concrete pavement. The loads employed were 18,000 lb. and 22,400 lb. on single axles, and 32,000 lb. and 44,800 lb. on tandem axles. Soils of various classification were found under the test lanes, and the findings indicate the effects of the loads on pavements with different types of subgrades.

As to single-axle loads on all types of subgrade, the tests showed that the 22,400-lb. loads caused 6.4 times as much cracking as the 18,000-lb. loads. They also showed that 58 per cent of the slabs in the lane subjected to 22,400-lb. loads and only 26 per cent of the slabs in the lane subjected to 18,000-lb. loads contained cracks, "which have been analyzed as constituting structural failures due to the application of the test axle-loads"; and that "the pavement at 50 per cent of the joints in the lane subjected to 22,400-lb. loads and at only 18 per cent of the joints in the lane subjected to 18,000-lb loads was markedly depressed and cracked."

Based on plastic-type subgrades (A-6 silty-clay soils) only, the results showed that the 22,400-lb. single-axle load caused seven times as much cracking as the 18,000-lb. single-axle load. Based on granular-type subgrades (A-1 soils), the results showed: (1) No pumping or cracking of either the 18,000-lb. or the 22,400-lb. single-axle loads where non-plastic granular soils with less than nine per cent passing the No. 200 mesh sieve (silt and clay sizes) occurred as subgrade; (2) "slight" pumping but no cracking under the 22,400-lb. load on "slightly" plastic granular soils containing more than nine per cent passing the No. 200 mesh sieve.

As to tandem axle loads on all types of subgrade, the tests showed that the 44,800-lb. tandem-axle loads caused 12.3 times as much cracking as the 32,000-lb. tandem-axle loads; and that 96 per cent of the slabs in the lane subjected to 44,800-lb. loads and only 27 per cent of the slabs in the lane subjected to 32,000-lb. loads contained cracks, "which have been analyzed as constituting structural failures due to the application of the test axle-loads."

The tandem-axle tests also showed that the pavement at 93 per cent of the joints in the lane subjected to 44,800-lb. loads, and at only 18 per cent of the joints in the lane subjected to 32,000-lb. loads was "markedly depressed and cracked"; and that "longitudinal cracking occurred in major extent only in the lane subjected to 44,800-lb. tandem-axle loads."

More Cracking

Based on plastic-type subgrades only, the results of the tandem-axle-load tests showed that the 44,800-lb. loads caused 12.5 times as much cracking as the 32,000-lb. There was no granular subgrade under the sections used for the tandem-axle-load tests.

"The predominant soil occurring on the test road was a silty clay of the A-6 soil group which is typical of the soils underlying an extensive mileage of concrete pavement in this country," the statement said. It also said that the test road was "well located with respect to the natural drainage environment."

As to the average number of load applications required to develop the first pavement crack on the A-6 subgrade, the board made these findings:

(a) It required more than four times

as many truck passes of the 18,000-lb. single as the 44,800-lb. tandem to develop first joint pumping and 4.2 times as many passes to cause the first slab crack.

(b) It required about twice as many truck passes of the 22,400-lb. single as the 32,000-lb. tandem to develop first joint pumping and 1.4 times as many passes to cause the first slab crack.

(c) It required approximately 1.5 times as many truck passes of the 18,000-lb. as the 22,400-lb. single-axle load to develop first joint pumping or first slab cracking.

(d) It required approximately 1.4 times as many truck passes of the 32,000-lb. as the 44,800-lb. tandem-axle load to develop first joint pumping and about 2.2 times as many to cause first crack.

Mather Outlines Capital Outlay Plans for C.P.

Acceleration of growth in the Canadian economy, as well as increased prices, indicates a probable necessity for larger capital expenditures for the Canadian Pacific than the approximately $80,000,000 annually over a five-year period estimated in 1949, W. A. Mather, president, said at the recent stockholders' meeting. Among the basic requirements of the C.P. to "meet the future inevitable growth of Canada," Mr. Mather listed the following:

Examination and reconstruction of terminal facilities to expedite flow of traffic; improvement of track standards by laying heavier rail; restoration and strengthening of embankments to permit heavier loads and higher train speeds; passing-track extensions to avoid delays in meeting and passing trains; further installation of automatic signals and introduction of centralized traffic control to increase capacity of congested lines; introduction of new methods of communication to expedite train movements and terminal handling; and greater use of diesel-electric locomotives.

THE COLORADO & WYOMING BUILDS A 10-MILE EXTENSION

To reach a new coal mining property of the Colorado Fuel & Iron Corp., a new 10-mile extension of the Colorado & Wyoming is being built in Los Animas county at a cost of $1.3 million. The line will connect with present C.&W. trackage in the little mountain village of Weston, near the south central Colorado border, and follow along a mountainside to the C.F. & I. mine at Allen. Considerable yard trackage will be constructed at the east portal of the mine, but the road will continue to the west portal — an additional distance of two miles.

Some portions of the C.&W.'s line in and near Weston were relocated to permit connection with the new route. Construction of the railroad, which was handled by the Brown Construction Company under contract, involved crossing several canyons and the building of several "access" underpasses so that ranchers of the area could continue to reach their properties with automobiles and service trucks.

Top—The Colorado & Wyoming is a subsidiary of the Colorado Fuel & Iron Corp.

Middle—After ballasting is completed, coking coal will begin to roll over these rails to steel mills at Pueblo.

Bottom—The Allen mine yard (as yet unballasted here) will be operated by diesel power.

"There is no question in my mind as to the future of this country," Mr. Mather said, "but there is a doubt as to whether the continuation of what appears to be the present policy of decreasing the hours of work without a compensating increase in production will not have an effect on the future prosperity of Canadians directly contrary to our hopes." Mr. Mather's review of C.P. operations during the first quarter of 1952 showed that gross railway earnings were up by $9,600,000 over the same period of 1951, largely reflecting the increase in freight rates. "However," he pointed out, "working expenses, which included the costs of the 40-hour week, increased slightly more, being up by $10,600,000. Freight traffic volume, in terms of gross ton-miles, was 13.5 per cent greater than the first quarter of last year."

Tariff Study Group Sends Out Sixth Questionnaire

The Railroads' Tariff Research Group has sent out the sixth of the series of questionnaires whereby it is seeking views of interested parties on ways and means of simplifying and otherwise improving tariffs.

Questionnaire No. 6 asks this question: From the tariff user's viewpoint, is it preferable that the amendment of tariff items and other numbered units of tariff matter be accomplished by showing the complete item (or unit) in the supplement or is it preferable to show in the supplement only so much of the item (or unit) as is affected by the change?

Growing Competition Called No Cause for Defeatism

Though growing competition from other forms of transportation is one of the biggest problems facing railways today, this is no cause for adopting a defeatist attitude, Donald Gordon, chairman and president of the Canadian National, said at the recent annual banquet of the road's Inter-Departmental Educational Association in Toronto.

"Pipelines are a relatively new development, and it has to be recognized that there are conditions under which we cannot compete with this specialized method of transportation," Mr. Gordon said. "Airlines are making rather alarming inroads into our first-class passenger business, and here we must face the fact that the airlines are supreme in the matter of speed. Buses and particularly trucks, are continuing raids on our business, and they bring with them both natural advantages in the matter of flexibility and small scale operations, and artificial advantages in the matter of regulation and responsibility for highway cost."

Railways are prepared to meet this competition, Mr. Gordon added. They can offer travelers safer and more comfortable trips, and they will continue to be the prime movers of the nation's freight, for no other carrier can move so much so far for so little. "But we will have to exercise all our ingenuity and resources," he warned, "to stop the trucker from carrying off the richest prizes. We must show that we deserve patronage because we can offer a better service or a better rate, or a more attractive combination of both these elements."

Mr. Gordon said he expected the proposed C.N. recapitalization plan would be brought into operation in the near future. "This will clean the windows of our financial house. Once the legacy of excessive debt has been lifted off our shoulders, we will be judged entirely on our merits, and it will be a challenge to everyone in the organization to show what we can do."

Freight Car Loadings

Revenue freight car loadings for the week ended May 10 were not available when this issue of *Railway Age* went to press.

Loadings of revenue freight for the week ended May 3 totaled 744,592 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, May 3

District	1952	1951	1950
Eastern	125,029	142,616	136,325
Allegheny	139,060	163,505	152,855
Pocahontas	55,436	61,809	59,650
Southern	132,965	129,339	122,500
Northwestern	115,710	128,906	104,204
Central Western	113,796	117,766	112,654
Southwestern	62,596	59,396	55,808
Total Western Districts	292,102	306,068	272,666
Total All Roads	744,592	803,337	743,996
Commodities:			
Grain and grain products	41,860	48,016	41,927
Livestock	11,140	9,923	9,576
Coal	127,644	132,894	150,147
Coke	10,905	15,957	14,276
Forest products	43,649	49,289	40,771
Ore	70,281	75,918	45,587
Merchandise l.c.l.	72,778	79,287	86,155
Miscellaneous	366,335	392,053	355,557
May 3	744,592	803,337	743,996
April 26	779,402	824,662	745,295
April 19	735,097	810,022	722,688
April 12	690,660	777,989	707,385
April 5	707,142	739,523	700,049
Cumulative total 18 weeks	12,994,960	13,449,491	11,743,418

In Canada. — Carloadings for the nine-day period ended April 30 totaled 109,694 cars, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
April 30, 1952	109,694	42,977
Cumulative Totals		
April 30, 1952	1,305,353	614,519
April 29, 1951 (estimated)	1,299,019	621,523

Eastern Roads Discuss Union Shop with Non-Ops

The conference committee created by Eastern railroads to handle "non-op" union shop negotiations has held its first meetings with representatives of the 17 unions of non-operating employees. Further sessions were scheduled to be held in Washington, D.C., last week, but had not begun as this issue went to press.

This move toward the "non-op" union shop grew out of an emergency board's recommendations of last February. The board found "no sound reason for withholding the union shop and check-off from these 17 organizations." (*Railway Age*, February 25, pages 57-60).

Amortization Certificates

Certificates of necessity for accelerated tax amortization of facilities were awarded to nine railroads in the April 18-24 period, the Defense Production Administration has announced.

The Chicago, Burlington & Quincy was authorized to apply accelerated amortization to 70 per cent of expenditures totaling $17,475,000. Other roads for which certificates were approved are listed below. The percentage figure in each case shows the amount which can be written off in five years.

Apalachicola Northern, $870,000, 70 per cent; and $750,000, 55 per cent.

Baltimore & Ohio, $1,543,317, 55 per cent.

Chicago, Milwaukee, St. Paul & Pacific, $2,259,250, 70 per cent.

Ft. Dodge, Des Moines & Southern, $1,150,000, 70 per cent.

Louisiana & Arkansas, $2,925,000, 70 per cent.

Ludington Northern, $100,552, 55 per cent.

Minneapolis, Northfield & Southern, $556,918, 70 per cent.

Wisconsin Central, $883,342, 55 per cent; and $1,525,000, 70 per cent.

Book Tickets for G.T.W. and C.N.

Latest to join the swing over to the book-type passenger ticket are the Canadian National and Grand Trunk Western. Similar to other book tickets which have been described by *Railway Age*, the C.N.-G.T.W. ticket book is bound with two to six coupons to accomodate needs of passengers in interline travel over two or more carriers.

Currently about 150 ticket offices of the system are using the new ticket and its use will be spread to all offices in U. S. and Canada.

European Track Practices Called Unsuitable for U. S.

"I am satisfied I saw nothing in track construction and maintenance methods in Europe differing from our own which could be applied to the railways of the United States, with our traffic and weight and speed of rolling stock." So concluded Max Ruppert, first vice-president of Poor & Co., in an informal talk before the Railway Supply Group of the Union League Club of Chicago on May 9. The speaker recently visited four European countries for a month with the "assignment" of searching for track maintenance methods and devices which might be adopted with profit in this country.

Except in western Germany, where

BENCH MARKS AND YARDSTICKS—11

"Evaluation of the efficiency of a traffic solicitation office should be made, not merely in the light of past performance, but by relating current business to industrial activity within the area for which that office is responsible"—so writes a staff officer of an important Eastern railroad. "For example, the relative efficiency of the office of a traffic solicitor for New England territory should be measured through use of an index of traffic credited to the New England office and compared with the Federal Reserve Board Index of industrial activity within New England. These could be plotted on a graph, showing the two indices as well as the per cent of variance from each other.

"A similar evaluation could be made as to the effectiveness of solicitation of various groupings of commodities (as is done on at least one road), using Federal Reserve Board indices for different industries and relating them to indices of carloads or tons of commodities handled (originated or total, as may be appropriate) that are used in carrying on the industry.

"To properly construct such indices of carloads, the raw materials should be separated from finished goods, since, generally speaking, the raw materials move on lower rates, and are subject to less competition from truck and air, than the finished goods. For example, the Federal Reserve Index on tobacco products could be compared with tonnage handled of tobacco, unmanufactured; and tobacco siftings, sweepings, and waste, on the one hand, to measure the relative improvement or loss of traffic as to inbound raw material and, on the other hand, compared with manufactured tobacco, N.O.S., and cigarettes, to reflect the relative improvement or loss of traffic in finished product.

"Such a series of indices would be helpful in evaluating whether solicitation was effectively obtaining new traffic, or whether increases in traffic were only because of increased production. On the other hand, it would also act to protect solicitors when production decreases."

This suggestion conforms to others on the subject of evaluating traffic department performance that have been printed in this space. The thought occurs, however, that a lot of duplicate effort would be involved if each railroad would compile its own indices of "potential" traffic for each area. Why shouldn't a group of traffic officers interested in this problem get together and agree how the indices should be compiled, and then divide the work among them?

It certainly ought to be helpful to get prompt information on traffic diversion and a yardstick of this kind would surely reveal the weak spots fast.

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insufficient materials and tools were available to bring railways back to prewar standards, Mr. Ruppert said he found that track and roadway were in excellent shape and that employees and officers took care and pride in their work. Conditions "over there," however, differ so from those in the U.S. that no real borrowing of ideas by us is feasible, he said, adding that "what they do is best for what they have, and what we do is still best for us"

In Britain he found railway officers still grappling with the problem of adapting themselves to nationalization and unification. Despite existence of a functional officer on the Railway Executive for engineering matters, there is a surprising amount of autonomy in this field left to individual regions, which can make a case for departure from national standards if they wish.

Another difficult transition in Britain is that from traditional "bullhead," chaired rail to American-style flat-bottomed T-rail. In Mr. Ruppert's opinion, most older and higher-placed engineers would like to return to chaired rail. In contrast, men "down on the track" are beginning to appreciate the virtues of T-rail and the opportunity to discard the special methods and tools the bullheaded rail entailed.

The British have evolved their own standard sections for T-rail—98 and 109 lb., respectively, he said. They prefabricate the track structure in 60-ft. lengths at central sites, and transport the lengths out to the job, employing special cranes for positioning. British track structure was found to be excellent. Manual labor predominates, with little use of heavy tamping or ballast working equipment. Track is shovel-packed and traffic-tamped.

Belgium, a traditional user of T-rail, employs a 102-lb. standard section, with screw spikes and no tie plates. As in Britain, track structure is prefabricated. Mr. Ruppert said France is experimenting "on a large scale" with concrete ties weighing 400 lb. each. They are prefabricated into standard lengths of track structure which are taken to the site and welded into longer segments. The track looks good and is well maintained, but rides hard. Use of concrete ties in Britain, he said, has almost been abandoned.

ONLY WOMAN WELDER in the General Electric Company's locomotive and car equipment department at Erie, Pa., Helen Zamborik, shown waving from the headlight opening of a new locomotive cab, started her welding career during the World War II manpower shortage.

D.T.A. Making Hawaiian Survey

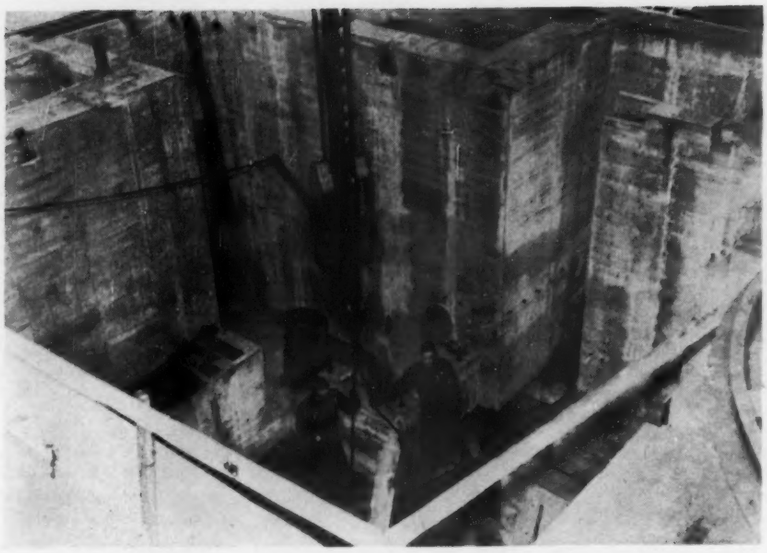
The Defense Transport Administration is making a survey of transportation, warehousing and port facilities in the Hawaiian Islands. The survey is being conducted by Wayne G. Brown, Lee A. Hyde, and Samuel E. Emmons.

Mr. Brown has been on D.T.A.'s staff for more than a year as assistant administrative officer. Messrs. Hyde and Emmons are serving as consultants. The former was director of D.T.A.'s Street and Highway Transport Department from December 1950, until February 1951. The Hawaiian survey will be the second such study, the first (on which a report is being prepared) dealt with Puerto Rico.

Depreciation Rates For A.C.L. and C. & O.

Equipment depreciation rates for the Atlantic Coast Line and the Chesapeake & Ohio were among those prescribed by the Interstate Commerce Commission in a recent series of suborders in the general proceeding — "Depreciation Rates for Equipment of Steam Railroad Companies."

Rates prescribed for the A.C.L. were: Diesel-electric switching locomotives, 3.88 per cent; diesel-electric road locomotives, 4.9 per cent; freight-train cars, 3.54 per cent; passenger-train cars of "conventional" type, 2.78 per cent; passenger-train cars of "lightweight equipment" type, 3.27 per cent; "heavy-weight" sleeping cars, 6.87 per cent; floating equipment, 1.78 per cent; "new" work equipment, 2.32 per cent; "converted" work equipment, 5.92



INTO this 20-ft. concrete-lined pit . . .

this heavy-duty crane lowered . . .

the bed of a 4,000-lb. capacity press which will stamp out freight car ends at the Hammond, Ind., plant of the Standard Railway Equipment Manufacturing Company. The press— said to be the largest ever used in the railway supply industry—is a part of the company's $5-million expansion and modernization program described on page 12 of the April 14 *Railway Age*.

per cent; miscellaneous equipment, 23.79 per cent.

Rates prescribed for the C. & O. were: Steam locomotives, 6.0 per cent; diesel-electric switching locomotives, 3.88 per cent; diesel-electric road locomotives, 4.9 per cent; freight-train cars, 3.4 per cent; passenger-train cars of "conventional" type, 4.0 per cent; passenger-train cars of "lightweight equipment" type, 3.27 per cent; floating equipment, 2.8 per cent; work equipment, 3.0 per cent; miscellaneous equipment, 12.4 per cent.

New C.N. Branch to Be Completed Late in '54

The House of Commons at Ottawa has given a second reading—said to be approval in principle—to a bill authorizing the Canadian National to build a 46-mile branch from its line at Terrace, B. C., to Kitimat, B. C. The new branch will serve a $500,000,000 aluminum development now under construction at Kitimat, on tidewater.

In debate on construction of the railway line to Kitimat, Lionel Chevrier, minister of transport, said plans call for completion of the line by November 1, 1954.

The Aluminum Company of Canada has agreed with the C.N.R. to provide traffic amounting to $1,000,000 a year for the first 10 years the branch line is in operation. If the value of traffic falls below that amount, the Aluminum Company will pay one-third of the deficiency. If any deficiency payments are made by the company, refunds will be made by the C.N.R. on the basis of one-third of any excess of gross revenue earned by the railway over $1,000,000 a year.

This refunding provision may be extended for a further 10 years but in any case the amount refunded by the C.N.R. to the Aluminum Company shall not exceed the total payments made by the company to the railway.

Mr. Chevrier said the branch line will carry traffic other than that of the Aluminum Company. The company has agreed to supply power to other industries locating in the Kitimat region. Lumber and fish are also expected to provide revenue for the railway.

U. S. Chamber Wants I.C.C. Reports on River Projects

The Chamber of Commerce of the United States is on record in favor of having the Interstate Commerce Commission report to Congress on the "overall desirability and public convenience and necessity" of any proposed inland waterway improvement for navigation purposes. A policy declaration to that effect was among those adopted by the chamber at its recent annual meeting in Washington, D.C.

The declaration was part of the chamber's declared policy on "water resources." Other policy declarations approved at the meeting included two new pronouncements on transportation.

One of them called for expedited

handling of intrastate rate cases by state regulatory bodies, and the other opposed the intervention in rate cases of agencies of the federal government —"except in their official capacity as direct users and purchasers of transportation service."

Other transport policies approved at the meeting were reiterations or revised statements of past pronouncements. They included calls for the maintenance of a "strong transportation system," the elimination of "state barriers" to interstate transportation, and liquidation or sale of the government-owned Inland Waterways Corporation, which operates the Federal Barge Lines.

Shippers Protest P.U. & D. Charge Proposal

More than 40 shippers, many of whom were not able to appear at a previous public hearing in New York, filed statements of protest in Chicago on May 7 at a hearing of the General Freight Traffic Committee — Eastern Railroads, on the proposed cancellation of all free pickup and delivery arrangements on l.c.l. in Official territory. The proposal calls for publication, in lieu of the free arrangements, of pickup and delivery charges "reflecting the current costs at individual points."

Most shippers felt railroads should not "penalize" l.c.l. shippers by the proposed charges but should find some other means of raising revenue to offset the cost of the service.

A previous hearing was held in New York on April 29, but many shippers were unable to prepare statements of objection in time, and, as a result, many eastern shippers were present at the Chicago hearing. Committee Chairman N. W. Gawkes, who presided at both meetings, said the carriers will meet again in New York on May 19 to consider objections to the proposal. Although not all shippers were able to present their objections orally at the Chicago meeting, statements and exhibits of those not heard were filed for inclusion in the minutes.

N.P.A. Meets with Diesel And Freight Car Groups

Members of the Diesel Engine Manufacturers Industry Advisory Committee met recently with the National Production Authority and, according to N.P.A., "described contentment with (the industry's) position under the controlled materials plan."

Manufacturers of diesel engines operating at 750 r.p.m. or less (the "slow speed group" which does not embrace many railroad diesels), reported they are having "no difficulty" in obtain-

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News Briefs . . .

. . . The power of advertising and promotion was demonstrated on the Union Pacific when, during February, it featured sauteed pork chops as its "Meal of the Month" in both consumer magazine advertising and in dining car promotion. The result—16,208 pounds of pork chops were sold during the month as compared to 5,793 pounds in January.

. . . The Norfolk & Western has won top honors among Virginia firms and organizations in the field of public relations. Presentation of a framed parchment scroll attesting to the award was made in Richmond during the recent fourth annual Virginia Public Relations Conference, cosponsored by the state Chamber of Commerce and the Richmond Public Relations Association. Award was made on the basis of the N. & W.'s general program of information and services to the public in the past year.

. . . Work on a new motion picture on forestry has been started by the Union Pacific's agricultural development department. It will depict the growing of both pine and fir forests, forest conservation, uses of wood and production, harvesting and processing of trees. The film will be in color, with sound.

. . . Lower rates on grain and grain products moving from central and western United States and Canada were put into effect by the Bangor & Aroostook on April 5. The new rates represent reductions as high as 47 per cent and will act as an incentive to stock raising in BAR territory, a spokesman for the road said. It also is thought the reductions will be of material aid in development of dairy and poultry industries recently established in the territory.

. . . From tending the furnace in his father's church to presidency of what is often described as the world's largest hotel system—the Pullman Company—the career of Carroll R. Harding has been detailed in the feature story series, "How Men at the Top Won Their Place," in the financial pages of the Chicago Tribune. He is the fourth man from the railroad industry to be selected by the editors for this series. Mr. Harding also has been named general chairman of Chicago's 1952 Community Fund campaign, in which position he will direct the activities of some 40,000 volunteer fund solicitors.

. . . Possibly the first eastern railroad to convert a business car for collection of blood for the armed forces is the Bangor & Aroostook. This road's converted business car No. 200, accompanied by an especially equipped combination car, began a tour of the B.A.R. system on May 5, to collect blood from railroad employees and other donors.

. . . The Union Pacific is going to adopt "Armour" yellow—presently used on its diesel locomotives and streamlined passenger cars—as the standard exterior color for all its passenger equipment. Color tests have convinced U.P. engineers that this yellow has a high degree of visibility under all conditions, particularly at night. For added night-time visibility, red "Scotchlite" reflective paint will be used for numbering, lettering and trim of each car. Many of the road's passenger cars are now painted in a two-tone grey scheme while others are in the traditional dark green. "Armour" yellow made its first appearance on the U.P.'s pioneer streamliner "City of Salina" in 1934.

. . . On May 3, the 10th anniversary of the streamlining of the Illinois Central's "Panama Limited," approximately 500 passengers aboard the train's north and southbound units were served small individual birthday cakes. The I. C. estimates that these all-Pullman trains have rolled up some 7 million miles on 7,306 trips between Chicago and New Orleans while carrying about 1.6 million passengers. Actually, the "Panama" is 36 years old, as it was first introduced in November 1916, taking its name from the Panama Canal. The train was completely re-equipped with air conditioned cars in 1934 and with streamlined cars in 1942.

. . . "A school on wheels" for members of the Baltimore & Ohio's traffic department began operating over a major portion of the road's system on May 4. The school, using a classroom car and a Pullman car for living accommodations, gives two-week courses on various B. & O. operations. It is conducted by the freight traffic department under supervision of Vice-president H. E. Simpson.

. . . Budget-priced meals are being served on three Union Pacific trains effective May 15. Breakfasts, luncheons and dinners costing $1 or less are available in the dining cars of the Omaha, Neb.-Ogden, Utah "Gold Coast"; the Kansas City-Los Angeles "Pony Express"; and the Denver-Portland, Ore., "Portland Rose." Breakfast prices begin at 65 cents and luncheons at 75 cents. A typical menu includes a breakfast of fruit juice or cereal and two eggs cooked as desired; a luncheon of baked individual chicken pie, vegetable, roll and beverage; and a dinner of grilled hamburger steak, potatoes and vegetables, dessert and beverage.

. . . Stockholders of the Chicago & Eastern Illinois got a clear picture of traffic trends, income and expense fluctuations and their significance when, at the road's annual stockholder's meeting in Chicago recently, President C. M. Roddewig employed a projector and colored slides to present a specially prepared series of charts and diagrams. Sitting informally beside the screen, Mr. Roddewig used a pointer to explain the charts and to answer—with visual emphasis—questions that came up from the floor during his report on the state of the railroad. Later he presented a series of Kodachrome pictures to show stockholders new facilities built, and methods adopted, within the year.

FARE: ONE PINT OF BLOOD

The Great Northern's new blood procurement car, "Richard Vincent Whalen," has embarked on a system-wide tour to collect whole blood for the armed forces. The car is being operated by the G. N. without cost to the American Red Cross. "Passengers" here prospective donors wait in reception room.

The collection room contains four beds built to Red Cross specifications. After the blood has been donated, it is taken to an accompanying baggage car equipped with refrigeration units. Daily shipments are made from the cars, by G. N. main-line trains, to the nearest processing laboratory.

MORE NEWS ON PAGE 175

Additional news appears on page 175, with regular news departments beginning on the following pages:

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ing materials and are able to maintain quarterly production schedules, N.P.A. said. The agency went on to say that committee members reported order backlogs for diesel engines (750 r.p.m. or less) are about the same as last year. Production is continuing at a "reasonably high level, although not at capacity," N.P.A. reported.

At another session recently, N.P.A. officials met with the Railroad Freight Car Component Parts Industry Advisory Committee. The group discussed recommendations for freight car production in this year's fourth quarter. The Defense Transport Administration has asked for materials to build 33,000 cars. As noted in *Railway Age* of May 5, page 12, the matter is now pending before the Defense Production Administration.

ORGANIZATIONS

V. R. Tupper, general traffic manager of Remington-Rand, Inc., New York, has been elected vice-chairman of the executive committee of the **Steel Office Furniture Traffic Association.**

William R. Lynch, traffic director of the Chevrolet Motor division of General Motors Corporation, has been elected president of the **Traffic Club of Detroit.** Edward Howe, general agent of the Nickel Plate, has been elected first vice-president, and Henry J. Commes, traffic manager, Nash-Kelvinator Corporation, second vice-president. The elections followed the resignation of President H. M. Phillips, who has been promoted by the Pennsylvania to the position of freight traffic manager at Chicago.

The dates for the 1952 annual meeting of the **American Railway Magazine Editors Association** at Santa Fe, N. M., originally set for October 20-22, have been changed to October 13-15.

The **Pacific Coast Transportation Advisory Board** will hold its 88th regular meeting at the Bellevue Hotel,

San Francisco, on June 12 and 13. Lloyd Graybiel, vice-president, American Trust Company, San Francisco, will be guest speaker at the luncheon session on June 13.

The **Transportation Club of Seattle** will move to new quarters at 7th Avenue and University Street on June 1. The new quarters include club rooms, a bar and dining and lounging facilities.

The seventh annual convention and exposition of the **National Defense Transportation Association** will be held at the Hotel Statler, New York, on October 27, 28 and 29.

F. B. Whitman, president, Western Pacific, will be the guest speaker at the "Bosses Night" meeting of the **Railway Business Women's Association,** to be held at the Clift Hotel, San Francisco, on May 27.

The eighth annual convention of the **National Association of Railway Business Women** will be held at the Antlers Hotel, Colorado Springs, Colo., June 20, 21 and 22. Representatives from 19 chapters will attend.

The Ahnapee & Western will be official host at Green Bay, Wis., for the first western regional meeting of the **American Short Line Association** to be held outside Chicago. At the one-day meeting to be held in the Hotel Northland on May 22, members will conduct group discussion of such subjects as: The advantage of radio communications in short line train service; costs and operating savings of diesel power on small roads; accounting shortcuts for small roads; freight claim prevention; the problem of car supply and the problem of meeting truck competition.

Members of the **Green Bay Traffic Club,** the **Fox River Valley Traffic Club** and other traffic men located within a 150-mi. radius of Green Bay will join members of the association in a shipper-carrier forum which will feature C. A. Miller, vice-president and general counsel, C. E. Huntley, secretary and W. R. Grimm, traffic manager, all of the association, as narrators. J. M. Hood, president of the association, will speak at an informal dinner to which the traffic men have also been invited.

OVERSEAS

India.—This country's government has announced an all-out effort to modernize equipment of the state-owned railroads. Orders have been placed with foreign manufacturers for 863 locomotives and India's own factories are now making spare parts. A locomotive manufacturing workshop has been established at Chittaranjan in West Bengal which is expected to turn out 120 complete locomotives and 50 spare boilers a year by 1956. During each of the next five years the government will acquire 12,000 to 13,000 new freight cars and 1,500 passenger cars. Equipment currently owned includes 8,900 locomotives, 229,000 freight cars and 17,000 passenger cars. Although partition split the country's rail system, with more than 6,000 miles of railroad going to Pakistan, India is now operating 33,984 miles of railroad.

WALTER S. FRANKLIN, president of the Pennsylvania, on the observation platform of the last train to leave old Broad Street Station in Philadelphia (*Railway Age*, May 5, page 92). With Mr. Franklin is Mrs. Henry P. Baily of Overbrook, Pa., a Philadelphia suburb. Mrs. Baily, who is 84 years old, watched trains entering the station on December 5, 1881, the day it opened, and was present to watch the last train depart on April 27.

SUPPLY TRADE

Symington-Gould 1951 Sales Were $18,593,304

Net sales of the Symington-Gould Corporation in 1951 totaled $18,593,304, compared with $11,374,136 in the preceding year, according to the recently released annual report. Net income was $906,424, compared with $1,172,678. Unfilled orders at the close of 1951, Hynes Sparks, president, said in the report, were approximately $20,000,000, an increase of $7,000,000 over orders on hand at the end of 1951.

"Not since 1929 has the Depew plant operated in the production of railroad specialties and other steel castings at such a consistently high rate of capacity," Mr. Sparks said. "In spite of high level operations during 1951," he continued, "usual profit margins could not be maintained due to filling a large volume of orders booked at prices in effect pre-Korea, and the absorption of increases in labor, material, and practically all other elements of cost . . . [Most of] the balance of our backlog will be invoiced at current price levels."

Stanley E. Horn has been appointed traffic manager of the **Cellulose Sales Company,** New York, and **Edward B. Mang,** assistant traffic manager.

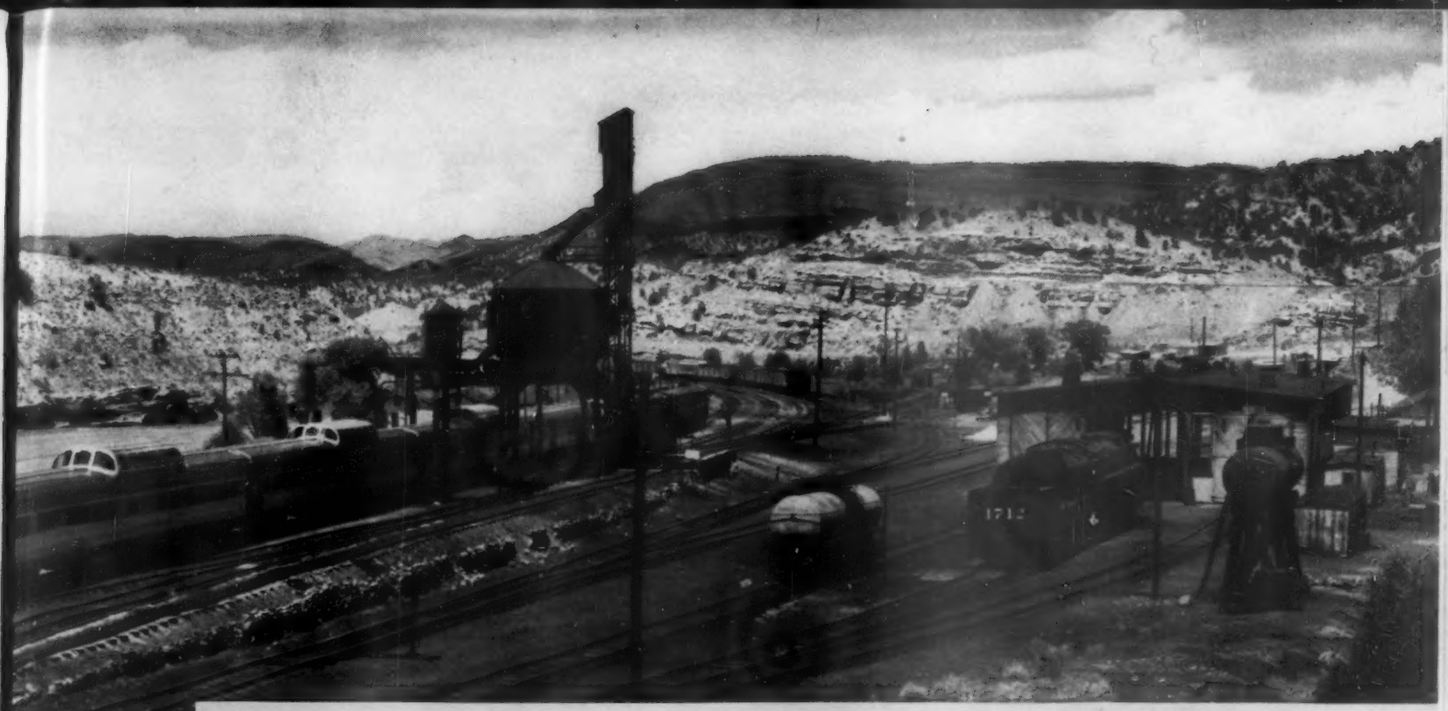
The **Babcock & Wilcox Co.** has moved from 85 Liberty street, New York, to 161 E. 42nd street, New York 17. In addition to the general office, the new quarters will house the New York district sales offices of the boiler division and of the refractories division. The New York district sales office of the tubular products division will remain at 22 E. 40th street.

T. R. Sadler has retired from the New York office sales department of the **American Steel Foundries,** after 47 years' service.

Stanley M. Hunter, vice-president and director of the **American Hoist & Derrick Co.,** has resigned.

A. O. Williamson has been appointed manager of the road machinery division of the **Wm. Bros Boiler & Manufacturing Co.,** Minneapolis. It also was announced that the com-

(Continued on page 175)



Versatile off-track power on the D. & R. G. W.

Just west of the Moffat Tunnel, on the main line of the Denver & Rio Grande Western Railroad, lies the tiny junction town of Bond, Colorado. There is a roundhouse and depot, a cafe, a hotel and a few houses. All the electric power for this remote community is generated by a pair of steady-running "Caterpillar" D13000 Diesel Electric Sets.

A few miles from Bond, you can see another railroad-owned "Cat" Diesel Engine at work. It's a D318, powering a Bucyrus-Erie dragline with a one-yard bucket, used for clearing fallen rock and earth and dumping it on the lower side of the right of way.

These are typical of the many off-track jobs done economically by "Caterpillar" units. And these versatile engines are equally at home on the rails, in yard and main line locomotives. The 44-tonners, powered by "Caterpillar" D17000 Engines, have set high records of availability. Today locomotives as large as 2000 hp. can be equipped with this dependable power, for "Cat" Diesel Engines up to 500 hp. are available.

In these times when all equipment must last longer, your "Caterpillar" Dealer will gladly help you plan a sound maintenance program that will add to the long life of the road's "Caterpillar" equipment.

CATERPILLAR TRACTOR CO. • PEORIA, ILLINOIS

CATERPILLAR

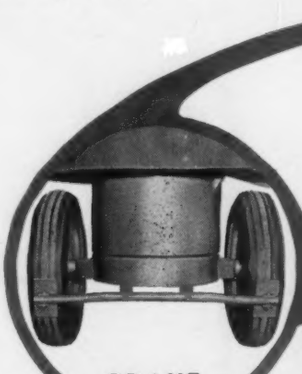
REG. U. S. PAT. OFF.

Railroad Diesels

Improved to do a Better Job

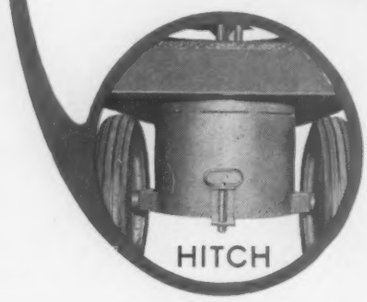
You can now meet your road's most exacting standards of appearance, floor protection, noise suppression and safety with these free-rolling and long lasting Baggage, Express and Mail Trucks and Carts — by F & H — supplied in standard Tractor-Drawn and Hand-Drawn Types — in colors of your choosing.

TRACTOR DRAWN EXPRESS TRUCK



DIMENSIONS

Part Number	102675	Length	120"
Width	43"	Capacity	6,000 lbs.
Floor Height	36"	Weight	1,050 lbs.



- Equipped with 5.50 x 16" pneumatic tires.
- Fifth wheel turns on sealed Timken bearings.
- Automatic safety brake is applied when tongue is raised — and released when tongue is lowered.
- Wheel hubs have sealed Hyatt roller bearings.
- F & H patented type safety hitch pin on rear for towing additional trucks.
- Only six points to grease.
- Modern, streamline design in colors to match trains.
- Nearly two hundred pounds lighter than similar trucks.
- The smart looking round end insures against gouging streamliners and avoids solid collision impacts when nosing through congested areas.

Know How

while
SERVING ECONOMY

TRACTOR DRAWN BAGGAGE & MAIL CART

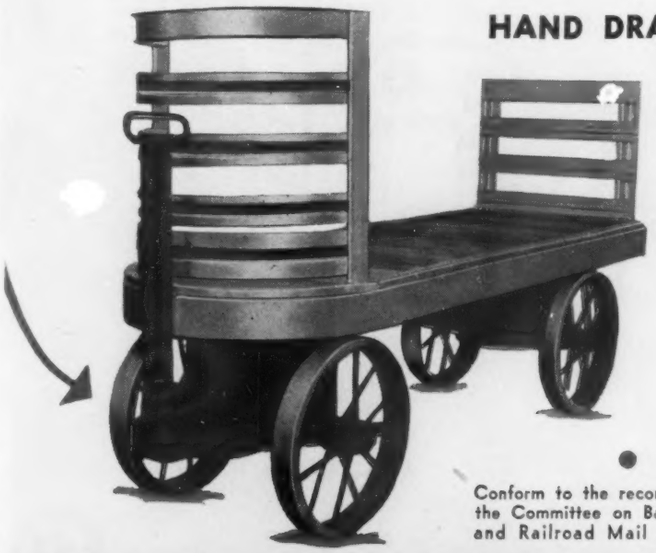
Conform to the recommendations of the Committee on Baggage, Express and Railroad Mail of the A.A.R.

DIMENSIONS

Part Number	102650	Length	120"
Width	40"	Capacity	5,000 lbs.
Floor Height	36"	Weight	750 lbs.

- Complete with 5.50 x 16" pneumatic tires.
- Fifth wheel turns on sealed Timken bearings.
- Equipped with F & H automatic safety brake.
- Wheel hubs are equipped with Hyatt roller bearings, grease seals and dust caps.
- Furnished with F & H patent type safety hitch.
- Six points to grease.

HAND DRAWN BAGGAGE & MAIL CART



DIMENSIONS

Part Number	102559
Width	40"
Floor Height	36"
Length	120"
Capacity	4,000 lbs.
Weight	725 lbs.

- Complete with 28 x 4 solid rubber tires.
- Equipped with longer tongue and larger hand loop than tractor drawn units.
- Possesses all other features of both tractor units except:

— capacity — no rear towing hitch

Conform to the recommendations of the Committee on Baggage, Express and Railroad Mail of the A.A.R.

Added Information Gladly Sent on Request

FRENCH & HECHT DIVISION

KELSEY-HAYES WHEEL COMPANY

DAVENPORT, IOWA

Brakes are Basic to Railroad Progress

THIS "TRAFFIC CLUB" MEETING CAN MEAN MORE BUSINESS FOR YOU

There's a meeting of an unofficial "Traffic Club" dozens of times a day —wherever travelers gather aboard the nation's trains.

And because these passengers are actual or potential shippers, progressive railroad men realize that the speed, comfort and safety enjoyed by "club members" creates good will and constitutes an important influence on freight traffic.

That's one important reason railroad management continually works on improvements that will insure a smoother ride on shortened schedules, with maximum safety and that is the field in which Westinghouse Air Brake has collaborated over the years.

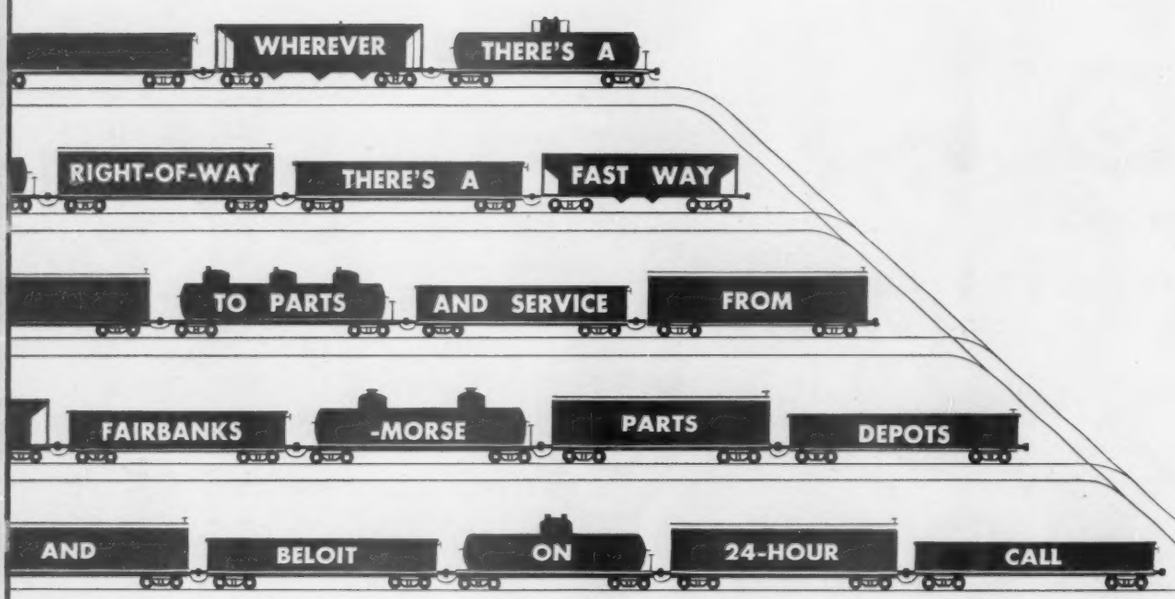
Westinghouse Air Brake Company's HSC Electro-Pneumatic Brake plays an important part in creating and holding the good will and patronage of "traffic club" members.

Westinghouse Air Brake Co.

AIR BRAKE DIVISION
WILMERDING, PA.

. . . JUST ONE OF THE REASONS
WHY THERE'S OVER A MILLION
OPPOSED-PISTON HORSEPOWER
ON THE RAILS TODAY!

Parts and Service...

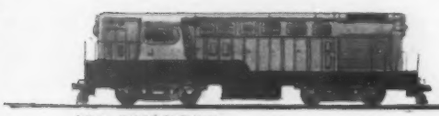


...only FAIRBANKS-MORSE offers

all along the Line!

No other Engine so Right
for all classes of Railroad Service!

SWITCHER



ALL PURPOSE

PASSENGER & FREIGHT

Opposed-Piston Horsepower!

FAIRBANKS-MORSE, *a name worth remembering*

DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS • SCALES • HOME WATER SERVICE EQUIPMENT • RAIL CARS • FARM MACHINERY • MAGNETOS

Mr. Railroad Executive: **PUSH THE MODERN RAIL-AUTO**

Hotter than an

Automobiles on the highways are filled with potential railroad passengers who can be won over to the railroads through active promotion of *the Hertz Rail-Auto Travel Plan.* It's a fact established by reliable surveys that millions of people still travel long distances by auto *just to have a car* to drive at the place where they plan to stay for awhile. Actually,

1 Hertz has invested, and will continue to invest, hundreds of thousands of dollars to increase the popularity of the Rail-Auto Travel Plan. We believe it's good business for both Hertz and the railroads. We believe that the increasing use of this Plan is perhaps the best method of bringing back *long distance travel* to the railroads . . . where it belongs.

It is heartening to see the steadily growing numbers of travelers who are convinced that it is better by far to travel by rail . . . then rent a car from Hertz for local use.

As evidence of Hertz' interest in the Rail-Auto Travel Plan, a few of the leading magazines in which Hertz conducts a consistent campaign are shown below.

only the surface has been scratched!

Last year people traveled by auto between cities an estimated	500,000,000,000 miles
Last year, Hertz customers *before* they rented cars, traveled by rail an estimated	500,000,000 miles
Potential passenger miles per year for railroads to go to work on	499,500,000,000

2 **What your railroad can do to promote this profitable plan.** Many railroads have made great strides forward through the introduction of modern equipment and faster schedules. But this is not enough. Nobody can deny that Americans will always like to travel on wheels they control . . . they like the freedom of movement that's expressed by driving an automobile where and when they please. So it seems to us at Hertz that the best way for railroads to regain lost revenue is to recognize and go along with the existing situation in order to arrive at a satisfactory solution.

Hertz' efforts to bring back passenger revenue to the railroads are obvious in the tremendous amount of advertising and promotion of the Rail-Auto Travel Plan which appears over Hertz' name in the nation's leading magazines on a 100 million-page a year schedule. And we're just getting started.

We believe that the most important "extra" the railroads can offer the traveling public is a private auto at the end of the line . . . and everywhere else in between. The Hertz Driv-Ur-Self System provides the cars, and good ones, at virtually every important stop on every major railroad.

It remains for the railroads, themselves, to capitalize in these ways on the wide acceptance of the Rail-Auto Travel Plan initiated by Hertz:

(a) In your own national and local advertising, and in your timetables, include a prominent mention that rental autos are available all along your routes.

(b) In your passenger stations, post suggestions that travelers avail themselves of the complete travel service . . . the Rail-Auto Travel Plan. Hertz will supply you with this material.

(c) Instruct your ticket agents . . . encourage them to sell Rail-Auto Travel Service. The reservations they make supplement *their* incomes, too.

whenever you travel on the L&N you can have a new car waiting at your destination!
L&N
PASSENGER TRAIN TIME TABLES
LOUISVILLE AND NASHVILLE RAILROAD
through the Hertz Rail-Auto travel plan
ENJOY THE HERTZ RAIL-AUTO PLAN NOW!
IN TIMETABLES

TRAVEL PLAN...IT'S

old fashioned depot stove!

they don't relish the fatigue, driving hazards and loss of time involved in long "over-the-road" driving for the sake of having a car handy when they arrive. Nevertheless, the practice continues, and too many people will persist in taking these risks and subjecting themselves to inconveniences *until they are sold on the merits of the Hertz Rail-Auto Travel Plan* . . . the promotion of which is a *two-way deal.*

3 **Workings of the Hertz Rail-Auto Travel Plan are as simple as** A B C

- The plan provides for the making of advance reservations of new cars for travelers to use at their destinations.
- Gas, oil and proper insurance are furnished at low, all-inclusive rates. There are no hidden charges.
- Cars from Hertz can be rented for an hour, a day, week, or as long as needed.
- An allowance is made up to 50c for cab fare from the railroad station to the Hertz station . . . and up to 50c for a reservation wire from the point of origin of the train trip, if R. R. teletype isn't used.
- A traveler can claim his car at any hour, day or night, at the convenient Hertz station, and drive where he likes in a car as private as his own.
- *It takes less than a minute of an agent's time* to fill out a Hertz reservation form.

Attention Ticket Sellers! Already Hertz Driv-Ur-Self System has mailed thousands of checks to railroad ticket sellers (when approved by railroad management) in 10% commissions on reservations made by them. Under Hertz policy, commissions are paid promptly; and keep in mind that when you sell the Hertz Rail-Auto Travel Plan you are helping your railroad make satisfied customers . . . permanent, profitable customers. *Write for complete information and Hertz Reservation Forms.*

All railroad employees, as are all Hertz employees, should be fully informed and helped to promote the Rail-Auto Travel Plan.

We urge you to write for full details to Mr. A. J. Shaughnessy, Hertz Driv-Ur-Self System, Inc., Dept. D52, 218 South Wabash Avenue, Chicago 4, Illinois. Ask for convenient reservation forms and informative literature. For we are sure that your railroad, too, wants to help make this great travel plan an increasingly powerful force in regaining revenues now lost to "over-the-road" driving.

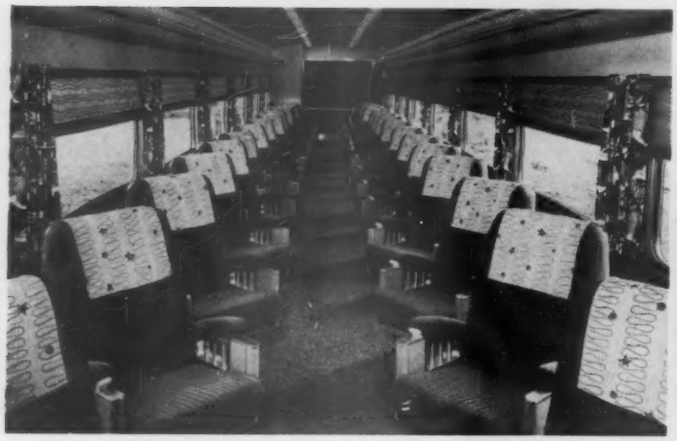
GO BY RAIL—avoid "over-the-road" hazards—
enjoy train luxury and comfort on long trips and when you get there—enjoy a new car from Hertz—drive it as your own—
HERTZ
A B C

IN HERTZ' "GO-BY-RAIL" ADVERTISING

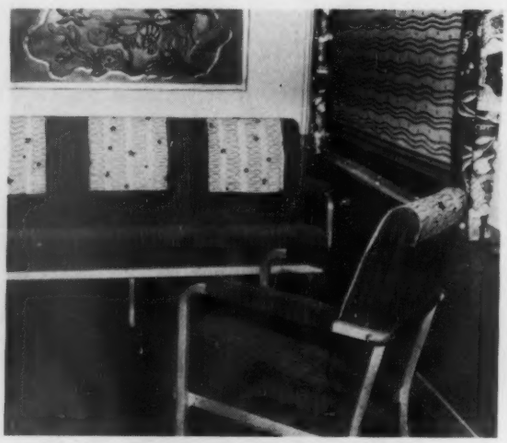
HERTZ
Driv-Ur-Self SYSTEM

HERTZ DRIV-UR-SELF SYSTEM . . . backed by 28 years' experience . . . the only nationally advertised, nationally accepted car rental organization . . . with more than 700 stations in over 500 cities.

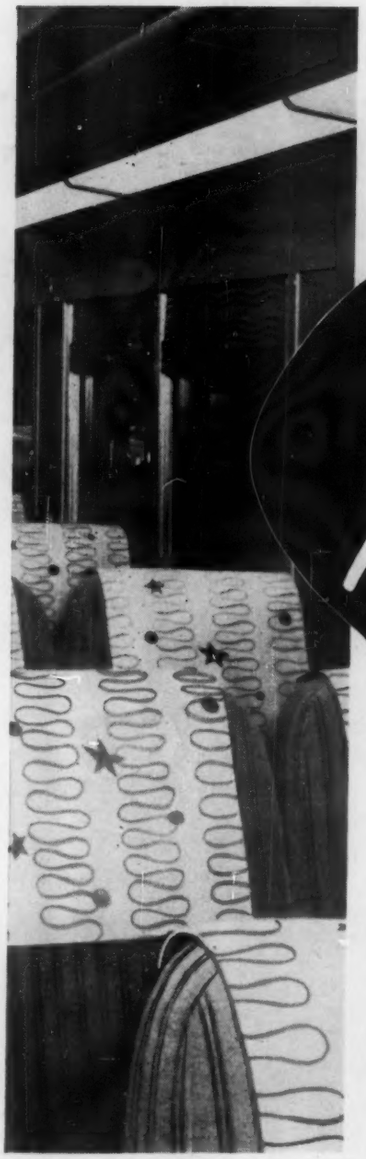
New comfort and luxury are achieved in the new coaches by Budd. Reclining-type seats and harmonious Goodall Fabrics decor contribute to passenger appeal.



The newly designed Parlor Cars by Budd feature Goodall Fabrics among their many inviting appointments.



Goodall Fabrics are an important part of the new Drawing Rooms in these Budd cars.



Pennsylvania R. R. Honors Goodall!

Another 100% Goodall Fabrics Installation

All woven fabrics in the New "Congressionals" and "Senator" are Goodall

TRADITIONAL ELEGANCE is freshly interpreted in "The Morning Congressional", "The Senator" and "The Afternoon Congressional"... all-new trains of the Pennsylvania Railroad. In line with the general high quality and luxury of appointments, Goodall Fabrics are used throughout for upholstery (woven), window shade facings, draperies, and headrest covers. Like all Goodall Fabrics these are *Blended-to-Perform* to give long wear, economical maintenance, and lasting beauty.

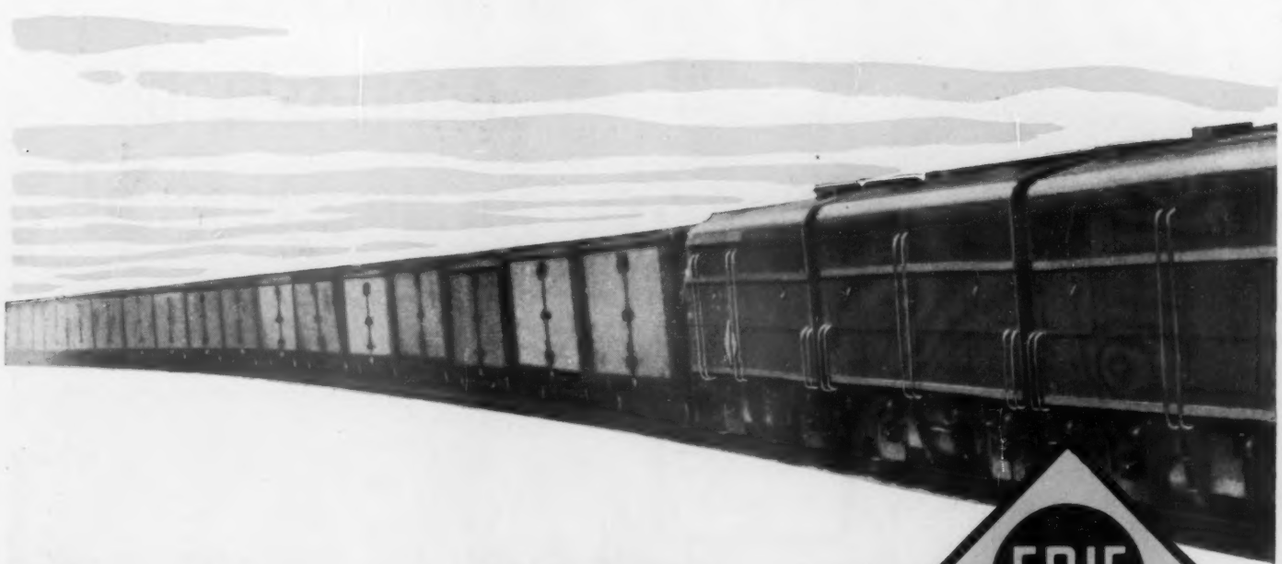
Goodall Fabrics
Subsidiary of Goodall-Sanford, Inc.
THE FINEST NAME IN FABRICS

Where durability and luxury are the keynote—
Goodall Fabrics are preferred

© 1952, Goodall Fabrics, Inc. Subsidiary, Goodall-Sanford, Inc. (Sole Makers of World-Famous PALM BEACH* Cloth) *Registered Trade Mark
GOODALL FABRICS, INC. • NEW YORK • BOSTON • CHICAGO • DETROIT • SAN FRANCISCO • LOS ANGELES

RUSHING PERISHABLES

from the West to "The Mrs." in the East!



The famous NY-98 of the ERIE is lubricated by

● The Erie Railroad is known as "The Route of the Perishables," carrying fresh foods to New York's millions. The key to Erie's streamlined, perishable-handling system is their hot-shot fruit express "NY-98."

This famous train highballs through the night over rugged terrain, with brief stopovers for re-icing, in time for New York markets. Hauling this 130-car, fast freight are 6,000 h.p. Diesels, lubricated with Sinclair Gascon Oil, for clean, smooth, dependable operation.

Practically all of America's top railroads have discovered they can get the last word in long, reliable service from their costly Diesels — with Sinclair Gascon® Oils.

SINCLAIR REFINING COMPANY, Railway Sales
New York • Chicago • St. Louis • Houston

SINCLAIR

Streamlite HAIRINSUL
PROTECTS PERISHABLES...
...ON THE MAINLINES...ON SIDINGS...EVERYWHERE!

At any location . . . at any temperature Streamlite HAIRINSUL provides maximum protection to valuable shipments of perishables.

Major refrigerator car builders have been using all-hair insulation for nearly half a century—and today they specify Streamlite HAIRINSUL because of its 40% less weight, higher efficiency and greater economy.

Yes, Streamlite HAIRINSUL assures you all the major advantages listed at the right—and more besides. Write for complete data.

LOW CONDUCTIVITY. Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.

LIGHT WEIGHT. Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

PERMANENT. Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

EASY TO INSTALL. Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

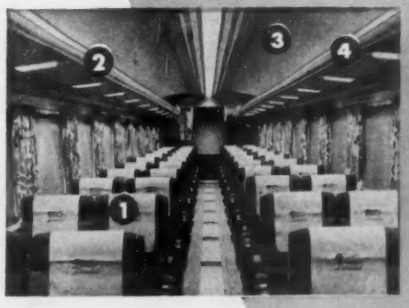
COMPLETE RANGE. STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.

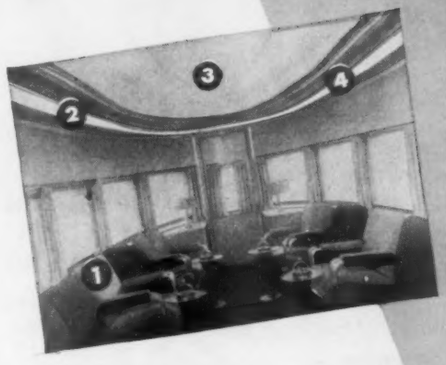
HIGH SALVAGE VALUE. The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

Sets The Standard By Which All Other Refrigerator Car Insulations Are Judged

Dept. H25, Merchandise Mart, Chicago 54, Ill.

Analyze your car interior from...





your PASSENGERS' point of view...

(1) Adequate Footcandles:
Luminator Engineered lighting systems provide the high intensity light necessary for comfortable reading. This is one of several factors required for "eye comfort" lighting.

(2) No Glare:
Eye discomfort resulting from excessive brightness or "glare" in the normal range of vision can spoil an otherwise perfect lighting system.

(3) General Illumination:
In addition to the above requirements, adequate general illumination is required to make an inviting and cheerful interior. This is a very important factor.

(4) Light Location:
For the most effective use of light available, the direction of light must come from overhead, falling at right angles to the reading material.

Other Applications:
In the Dining Car, Coach and Observation Cars illustrated above, it is easy to follow the principles of engineered lighting. These same principles can be used in lighting any other type of cars, such as Pullmans, Suburban Cars, etc.

We invite you to inspect our lighting laboratories, where engineered lighting systems are displayed.

LIGHTING ENGINEERS · DESIGNERS · MANUFACTURERS

LUMINATOR inc.

120 NORTH PEORIA ST., CHICAGO 80, ILLINOIS
IN CANADA RAILWAY AND POWER ENGINEERING CORP.

SHIELD *of* MODERN FIRE PROTECTION

"headquarters for the finest"

Foremost design, experienced engineering, quality materials, expert workmanship and operating superiority are all bywords of the C-O-Two Fire Equipment Company... originators of the world famous C-O-TWO Squeez-Grip Carbon Dioxide Type Fire Extinguishers.

C-O-TWO, being specialists in modern fire detecting and extinguishing equipment for many years, are constantly striving to develop new and improved types of fire protection equipment that will render highly efficient results in safe-guarding life and property from the ravages of fire.

With C-O-TWO Fire Protection Equipment, simplicity, practicability, longevity and minimum maintenance are built-in features that guarantee fast, positive action the instant fire strikes. Furthermore, extensive skill and high quality standards, together with approvals such as the Underwriters' Laboratories, Inc., Factory Mutual Laboratories, Armed Forces and Government Bureaus assure you of the finest in modern fire protection equipment.

Among the many types of up-to-date fire protection equipment manufactured by C-O-TWO, the following comprise the principal items on the market today:

- **carbon dioxide type hand and wheeled portable fire extinguishers**
- **dry chemical type hand and wheeled portable fire extinguishers**
- **carbon dioxide type hose rack and hose reel fire extinguishing units**
- **built-in high pressure carbon dioxide type fire extinguishing systems**
- **built-in low pressure carbon dioxide type fire extinguishing systems**
- **built-in smoke fire detecting systems**
- **built-in heat fire detecting systems**
- **high pressure carbon dioxide cylinder recharging equipment**

So, with current expensive delayed replacements, why not let an expert C-O-TWO Fire Protection Engineer help you now in planning modern, economical, fully approved fire protection facilities for your various properties. Our experience is at your disposal . . . no obligation of course. Get the facts today!

C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

Affiliated with Pyrene Manufacturing Company

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers • Dry Chemical Type Fire Extinguishers • Built-In Smoke and Heat Fire Detecting Systems
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems

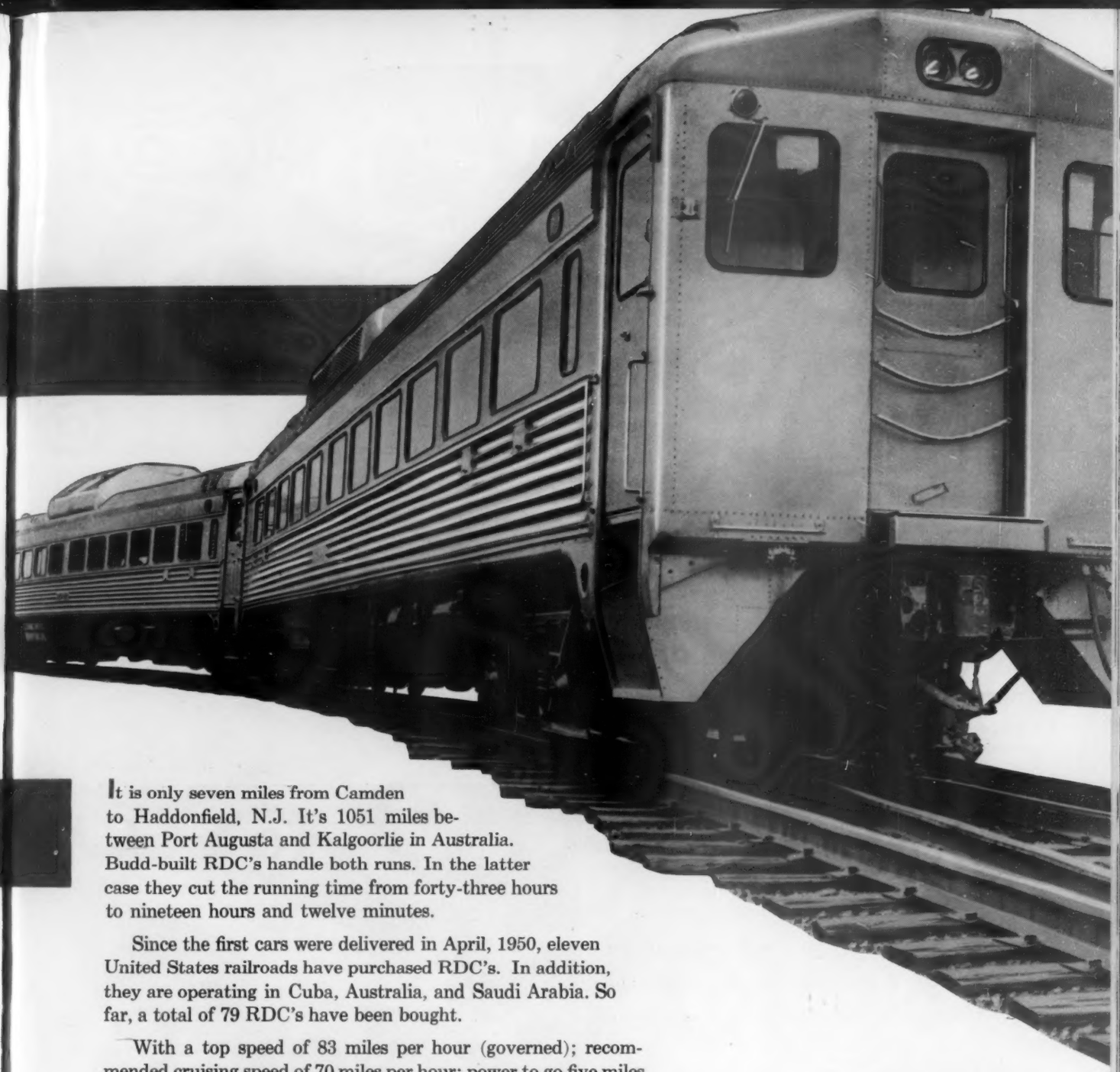
You Name It...

RDC

Does It

DATA ON BUDD SELF-PROPELLED RAILWAY CARS (TYPE RDC)
APRIL 1950 TO MAY 1952

RAILROAD	ROUTE MILES	DAILY TRAIN MILES	NUMBER OF RDC's IN USE
BALTIMORE & OHIO		246	2
Brunswick-Washington	49		
Washington-Baltimore	37		
BOSTON and MAINE		918	3
Boston-Troy	190		
Boston-White River Jct.	143		
White River Jct.-Springfield	123		
CHICAGO and NORTH WESTERN		222	3
Chicago-Waukegan	36		
Chicago-Crystal Lake	43		
Chicago-Barrington	32		
COMMONWEALTH RAILWAYS OF AUSTRALIA		450	3
Port Pirie-Port Augusta	56		
Pimba-Port Augusta	113		
Port Augusta-Kalgoorlie	1051		
CONSOLIDATED RAILWAYS OF CUBA		1064	16
Santa Clara-Puerto Tarafa	200		
Santa Clara-Moron	100		
Moron-Sola	72		
Moron-Jucaro	38		
Moron-Ciego de Avila	21		
Jucaro-Ciego de Avila	17		
Camaguey-Santa Cruz	61		
LEHIGH VALLEY		208	2
Hazleton-Lehighton	26		
NEW YORK CENTRAL SYSTEM		3788	18
Boston-Albany	200		
Boston-Springfield	98		
Boston-Framingham	21		
Albany-North Adams	71		
Albany-Pittsfield	50		
Chatham-Pittsfield	27		
Chatham-North Adams	48		
Harmon-Peekskill	8		
Detroit-Midland	139		
Syracuse-Massena	161		
Buffalo-Niagara Falls	25		
Buffalo-Suspension Bridge	27		
Jackson-Grand Rapids	95		
Poughkeepsie-Albany	69		
Syracuse-Buffalo	146		
NEW YORK, NEW HAVEN & HARTFORD		855	5
Boston-Providence	44		
Boston-Needham Heights	14		
Boston-Buzzards Bay	55		
Buzzards Bay-Hyannis	25		
Buzzards Bay-Woods Hole	17		
P-R SEASHORE LINES		1700	12
Camden-Ocean City	69		
Camden-Wildwood Crest	78		
Camden-Cape May	81		
Camden-Haddonfield	7		
Camden-Millville	41		
Camden-Atlantic City	58		
SANTA FE		512	2
Los Angeles-San Diego	128		
SAUDI ARABIA			3
Dammam-Riyadh	350		
SUSQUEHANNA		924	4
Paterson-Susquehanna Transfer	21		
WESTERN PACIFIC			
Oakland-Salt Lake City	924	792	2



It is only seven miles from Camden to Haddonfield, N.J. It's 1051 miles between Port Augusta and Kalgoorlie in Australia. Budd-built RDC's handle both runs. In the latter case they cut the running time from forty-three hours to nineteen hours and twelve minutes.

Since the first cars were delivered in April, 1950, eleven United States railroads have purchased RDC's. In addition, they are operating in Cuba, Australia, and Saudi Arabia. So far, a total of 79 RDC's have been bought.

With a top speed of 83 miles per hour (governed); recommended cruising speed of 70 miles per hour; power to go five miles in five minutes from a standing start—RDC is operating in every kind of short-haul and long-haul passenger service, either singly, or in trains of any desired length with a constant power-weight ratio. And in every case, at greatly reduced operating and maintenance costs.

Because of its adaptability and flexibility, RDC is becoming the all-purpose train of the future. The Budd Company, Philadelphia 32.

Budd

RDC BRINGS THEM BACK TO THE RAILS

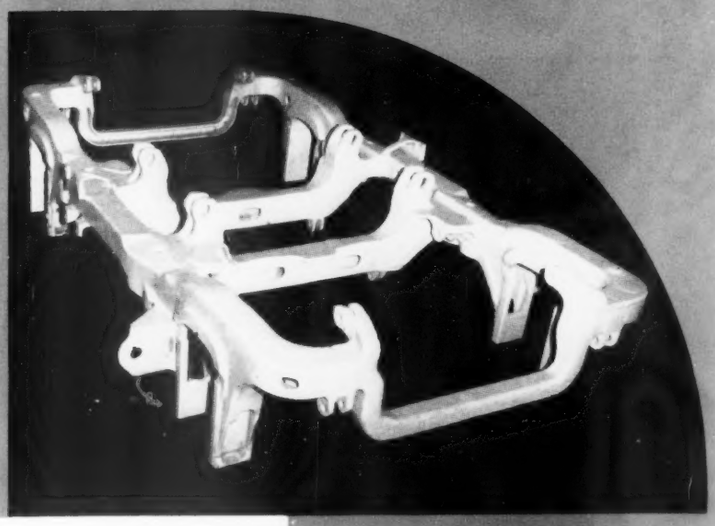
PENNSYLVANIA RAILROAD'S NEW TRAINS...

The Morning Congressional,
The Afternoon Congressional
and The Senator

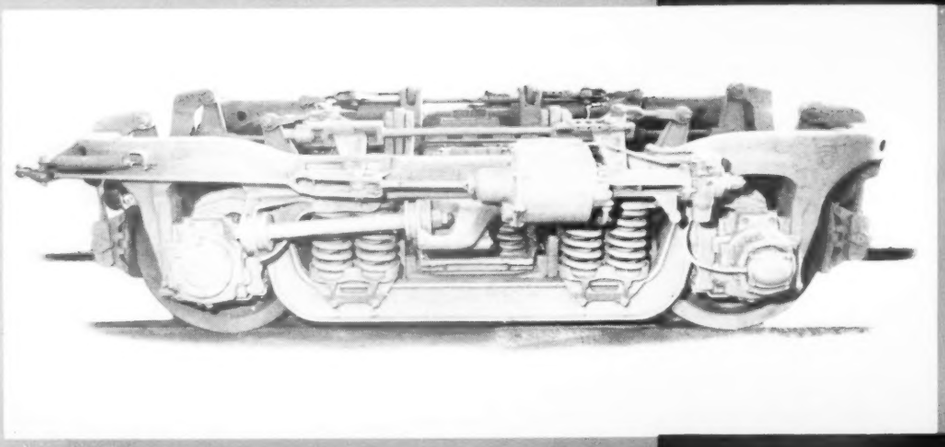
Ride on

COMMONWEALTH TRUCKS

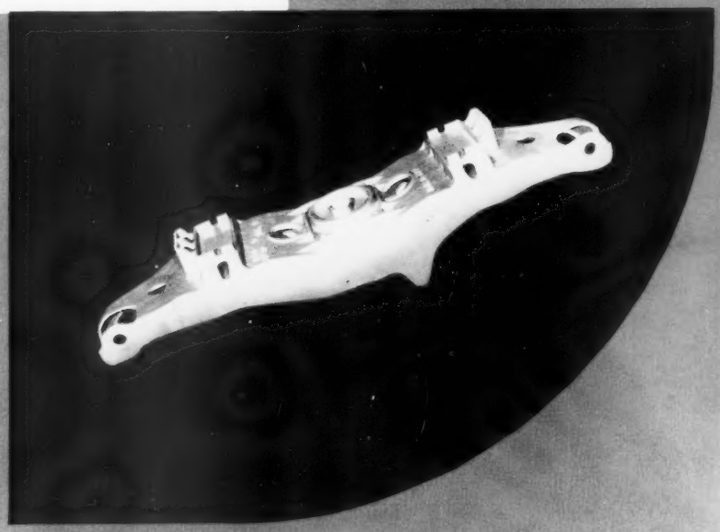
For Passenger Comfort
and Operating Economy



One-piece passenger car truck frame



One-piece truck bolster



Sixty-four new passenger cars built by the Budd Co. for the Pennsylvania Railroad "Congressionals" and "Senators," operating between Boston, New York and Washington, are equipped with safe, smooth, comfortable riding COMMONWEALTH 4-wheel passenger car trucks.

These trucks of the Pennsylvania's latest design with COMMONWEALTH one-piece cast steel frames and bolsters provide great strength and durability for safety, long service life and a minimum of maintenance expense. Their superior riding qualities assure exceptional passenger comfort.

GENERAL STEEL CASTINGS

GRANITE CITY, ILL. • EDDYSTONE, PA.

"Word's getting around—

THE NEW FASHIONED WAY OF DICTATING

IS TELEVOICE!"

Only Edison makes it!

Thomas A Edison
INCORPORATED

It solves your secretary shortage!

One TELEVOICEWRITER at a secretary's desk records for a *number* of dictating phones. We take any competent secretary and have her comfortably handling the dictation of three, six—even twenty people, if you like—from the first day on! . . . Nothing equals TELEVOICE for e-a-s-e of use—for getting work out faster—for low, *low* cost. The trend is to TELEVOICE, the *new*-fashioned way.

IN THE BALTIMORE & OHIO's car service department, for example, TELEVOICE enables just three secretaries to handle all dictation. Extra help is no longer needed for peak loads. TELEVOICE also serves B & O's transportation department.

EDISON TELEVOICEWRITER

The Televoice System

Read this eye-opening booklet! Shows you how TELEVOICE gets faster action—with greater ease—at lower cost. No obligation—just send coupon, filled in or clipped to your letterhead. Or phone your local THOMAS A. EDISON representative for demonstration.

Thomas A. Edison, Inc. *(Ediphone Division)*
44 Lakeside Ave., West Orange, N. J.

Okay—send me A LINE ON TELEVOICE

Name_____

Title_____

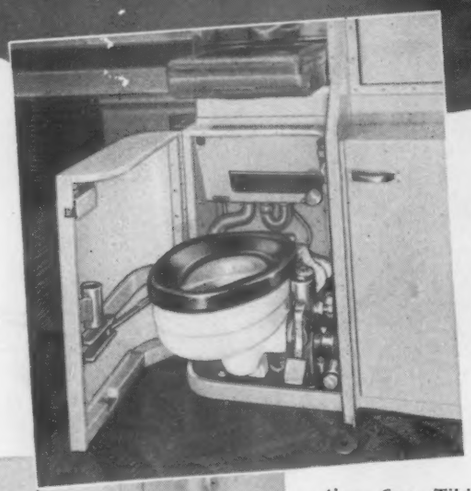
Company_____

Address_____

City_____ Zone____ State____

CRANE

the preferred plumbing



paying dividends in lasting service... lowest upkeep!

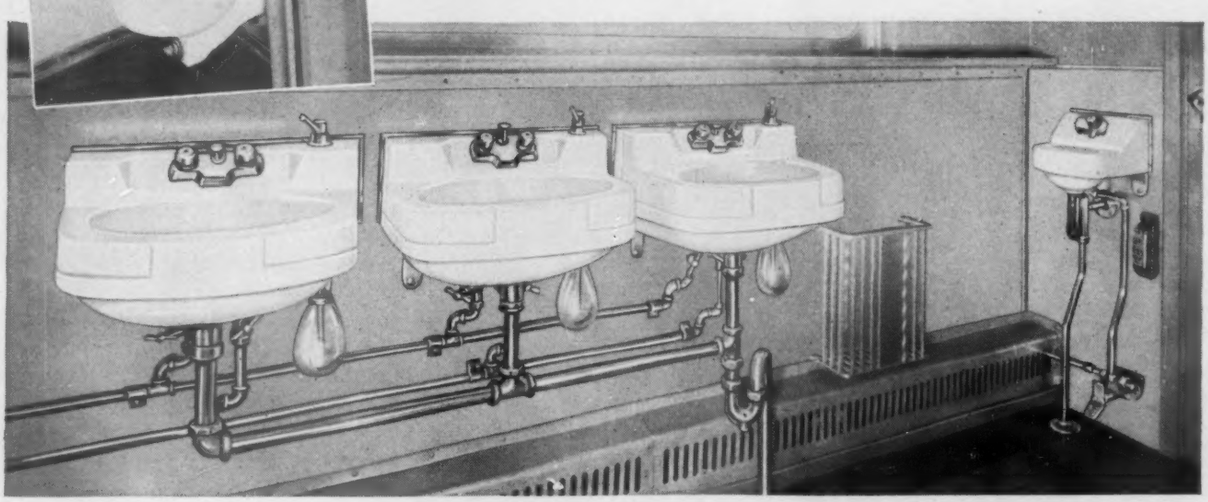
The consistent high quality of Crane sanitary equipment for railroads has made it the preferred plumbing all up and down the line. You'll find it aboard high-speed feature trains—on the dependable commuters—and in the way stations and terminals across the country.

Providing the rail traveler with all the comforts and sanitation of America's *preferred* home plumbing, Crane sanitary equipment also protects the operators' interests with design and construction able to withstand the use and abuse of constant public service.

Above: Crane Tilting *closet of easy-to-clean vitreous china. A space saver and advancement in rail travel comfort.*

Left: Efficient, wall supported water closet. Crane quality vitreous china.

Below: A bank of Crane Lavalux *vitreous china lavatories and the sanitary* Oral Hygiene *dental lavatory.*



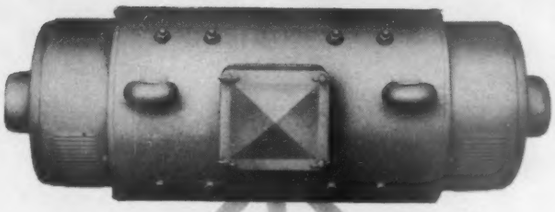
CRANE CO. GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO 5

VALVES • FITTINGS • PIPE
PLUMBING AND HEATING

By Any Comparison...

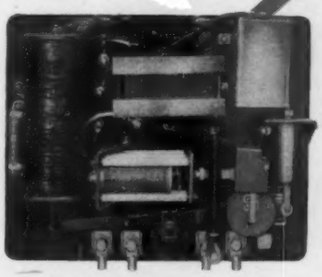
VOLTAGE REGULATION ✓
FREQUENCY REGULATION ✓
EFFICIENCY ✓
DEPENDABILITY ✓

THE "SAFETY" 7KW MOTOR ALTERNATOR... has no equal... for heavy AC loads on railroad passenger cars

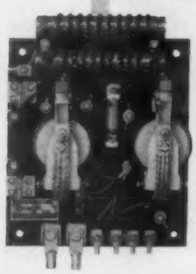


The "Safety" 7KW Motor Alternator and its accompanying voltage and frequency regulators and starter will give you . . .

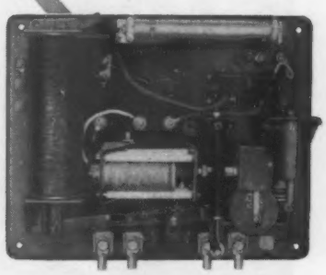
- Exceptionally high efficiency even at light loads
- Accurate, stable frequency and voltage regulation, which is independent of power factor
- Rapid, positive response to load changes



Frequency Regulator



Step Starter



Voltage Regulator

AVAILABLE IN THE FOLLOWING RATINGS

Catalog Number: Motor Alternator	Output Rating KW	DC Input volts	AC Output volts	Phase	Cycles	Catalog Number: Frequency Regulator	Catalog Number: Starter	Catalog Number: Voltage Regulator	Total Weight
318001	7.0	64	230	3	60	318168	318050	318052	1039
316800	7.0	115	230	3	60	318860	317683	316854	1039

Write for Bulletin 4412

THE SAFETY CAR HEATING AND LIGHTING COMPANY INC.

NEW YORK · CHICAGO · PHILADELPHIA · ST. LOUIS · SAN FRANCISCO · NEW HAVEN · MONTREAL

SAFETY COMPANY PRODUCTS INCLUDE: Air-conditioning Equipment • Genemotors • Generators • Fans • Regulators Lighting Fixtures • Switchboards • Parcel Racks • Motor Alternators • Dynamotors • Motor Generators • Dual Voltage MG Sets

Setting a new standard

SHELL TALONA R OIL 40

For all diesel engines in railway service

for anti-wear performance

An advance in railroad diesel lubrication that rivals the discovery of anti-sludge compounds!

SHELL TALONA R OIL 40 combats the main causes of diesel engine wear so successfully that accepted wear standards must now be revised. *This gain is achieved without sacrifice of any basic lubricating function.*

Especially favorable is the wear reduction at the critical top-cylinder zone. By maintaining original cylinder-wall and piston-ring dimensions longer, engine efficiency stays at a high level and crankcase contamination is greatly reduced.

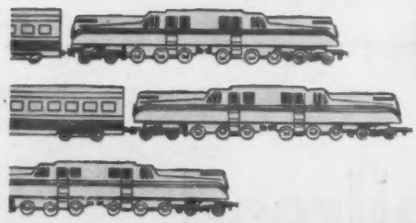
Investigate the anti-wear advantages of Shell Talona R Oil 40 for *your own* diesel units.

SHELL OIL COMPANY

50 WEST 50TH STREET, NEW YORK 20, NEW YORK
100 BUSH STREET, SAN FRANCISCO 6, CALIFORNIA
SHELL BUILDING, ST. LOUIS 3, MISSOURI

SHELL

3 brand-new Pennsylvania trains with a special air about them



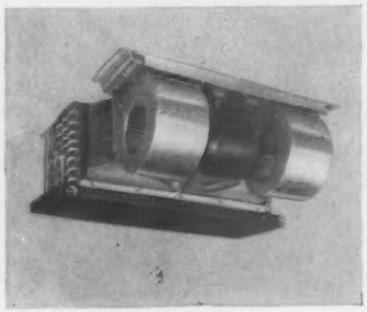
Now three wonderful new Budd-built Pennsylvania Railroad luxury streamliners — the *Morning Congressional* between Washington and New York, the *Senator* between Washington, New York and Boston, and the *Afternoon Congressional* between Washington and New York. These smart trains offer passengers every advantage known to modern railroading—safety, beauty, comfort, convenience, speed. And, it must be added, complete Frigidaire air conditioning.

Frigidaire equipment—made by the world's largest makers of railway air conditioning equipment—sets a splendid new standard of passenger-pleasing dependability. Every rider in the 64 new cars making up these splendid trains benefits from the overall comfort provided by Frigidaire—even in ways not apparent to the casual passenger.

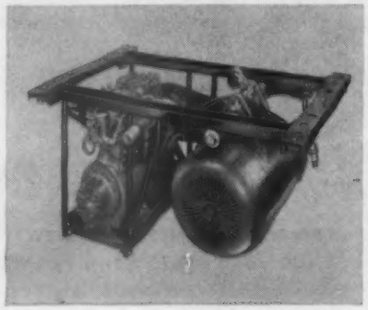
For full information about Frigidaire railway air conditioning, refrigeration, and electric generating equipment, write Frigidaire Division of General Motors, Dayton 1, Ohio.

FRIGIDAIRE

World's largest maker of railroad air conditioning units

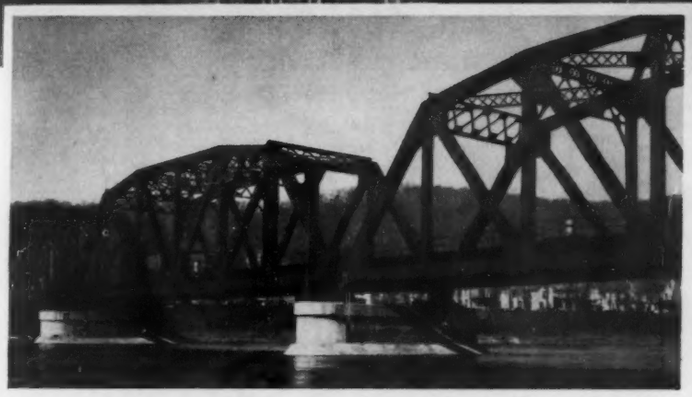


Frigidaire air conditioning apparatus is used on hundreds of America's finest trains, providing the clean, refreshing atmosphere that adds so much to the comfort and pleasure of modern railroad travel.



This unit is an example of Frigidaire's development of a ruggedly constructed, efficient unit. It will provide long life with low maintenance which is of paramount importance in railroad air conditioning service.

A brand new bridge in 7½ hours!



LARGE PHOTOGRAPH at top shows the new bridge on falsework alongside the old bridge. Falsework for the old bridge can be seen on the opposite side of the piers. Directly above is view of new bridge after removal of old bridge and all falsework.

NEW BRIDGE is in position on piers. Old bridge is on falsework.

CLEAR TRACK AHEAD! Job completed, the bridge is open for traffic.

The structure was designed by the Pennsylvania Railroad Company. Fabrication, erection and removal of the old span was by American Bridge.

AVAILABLE NOW! For showing in churches, schools, clubs and industries, the new sound and color motion picture—BUILDING FOR THE NATIONS—a candid, factual photographic record in full color of the highlights of the fabrication and erection of the United Nations' Secretariat Building in New York City.

How novel use of the "double shift" speeded erection of Pennsy's new triple-span bridge over the Allegheny River

PENNSYLVANIA RAILROAD'S new double track bridge over the Allegheny River at Warren, Pa., is another example of American Bridge ingenuity. In this case, an old bridge was replaced by a modern structure on the existing piers with a minimum of traffic interruption.

The project involved the erection of three double-track, thru truss spans, each 154'6" long and 33' c.c. of trusses, on falsework adjacent to the existing piers, simultaneously rolling the old structure off these piers onto similar falsework, and the 2,200-ton steel superstructure with its ties, rails, timbers and pipe railing into position on the original piers.

The amazing "double shift" transposition was completed—all six spans simultaneously—rails connected, and the new bridge opened for trains after a traffic interruption of only 7½ hours!

Jobs like this, and the more recent one for the Illinois Central at Cairo, explain why so many railroads rely upon the know-how, the facilities, and the experience of American Bridge to handle the most difficult construction problems.

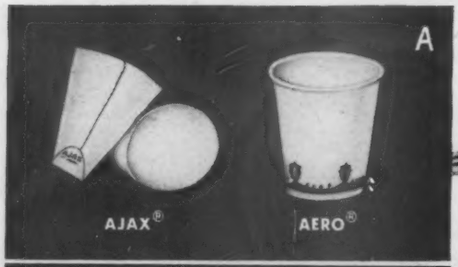
AMERICAN BRIDGE DIVISION, UNITED STATES STEEL COMPANY
GENERAL OFFICES: 525 WILLIAM PENN PLACE, PITTSBURGH, PA.
Contracting Offices in: AMBRIDGE · ATLANTA · BALTIMORE · BIRMINGHAM · BOSTON · CHICAGO CINCINNATI · CLEVELAND · DALLAS · DENVER · DETROIT · DULUTH · ELMIRA · GARY · MEMPHIS MINNEAPOLIS · NEW YORK · PHILADELPHIA · PITTSBURGH · PORTLAND, ORE. · ROANOKE ST. LOUIS · SAN FRANCISCO · TRENTON UNITED STATES STEEL EXPORT COMPANY, NEW YORK

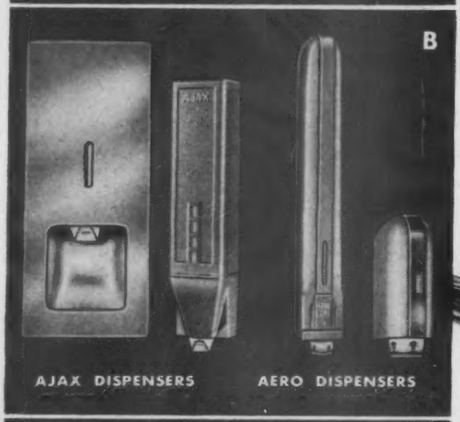
USS TRADE MARK

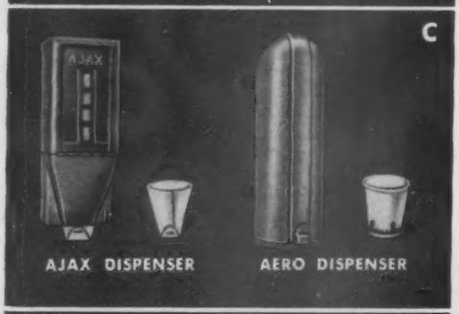
AMERICAN BRIDGE

UNITED STATES STEEL

A Complete Paper Water Cup Service for Railroads







FOR PASSENGER COACHES and SLEEPING CARS

Meet passengers' demands for comfort and strict sanitation with harmonizing, easily accessible dispensers, crisp and clean Ajax or Aero paper cups. And as they drink, *greet them with your message imprinted on the cup* — a service they'll remember.

A **AJAX PAPER CUPS** — Fit the hand perfectly. Have convenient open mouth. Can be held safely and easily even while train is in motion. Wedge shaped with reinforced bottom fold.

AERO PAPER CUPS — Match the luxurious appointments of your De Luxe trains. Round, sturdy cups with rolled drinking edge and flat bottom. Attractively decorated.

B **STEEL DISPENSERS** — Designed especially for modern passenger cars. Recessed and wall type dispensers. Can be firmly secured in place — harmonize perfectly — hinged panels for easy filling — unbreakable windows show when servicing is necessary.

FOR LOCOMOTIVES and CABOOSES

Approved WATER CUP SERVICE
AJAX or AERO Cups with Neat, Steel Dispensers

C In some states railroads are required by law to supply drinking water and dispensers to operating employees. To comply with the law or simply to promote good employee relations, many roads use AJAX and AERO Cups and Dispensers in locomotives and cabooses.

Your employees will enjoy the clean, crisp cups — so easy to hold, so easy to drink from. The dust-proof dispensers of heavy steel can be bolted or welded securely in place. Cups will not fall out yet can be drawn out singly. AJAX Dispensers hold 125 cups — AERO 50 cups.

FOR MAINTENANCE and CONSTRUCTION CREWS

AJAX PORTABLE
Drinking Water Service

D Deliver fresh, cool water to the workers right on the job with the Ajax Mobile Drinking Water Tank. Your work crews will appreciate its sanitary features and you will gain through improved health of employees, less absenteeism, better morale, less lost time on the job.

Here is a tank that's built to last. Made of rugged, aluminum-finished galvanized iron, firmly riveted and braced. Strong carrying straps. Sturdy, guard-protected faucet on bottom. Leak-proof, dust-proof. Easy to keep clean and sterile. Furnished complete with an Ajax Dispenser and Ajax paper cups.

YOUR MESSAGE WILL BE READ OFTEN

E Imprinted on the front of the drinking cups, your friendly greeting will catch the passengers' eyes — and be remembered as a token of friendship and good will. Or use the cups to sell your *safety* messages to the public — to your employees. Several times every day they'll stop for a drink of water. No other method offers such a sure way of getting your messages read — and *read again and again.*

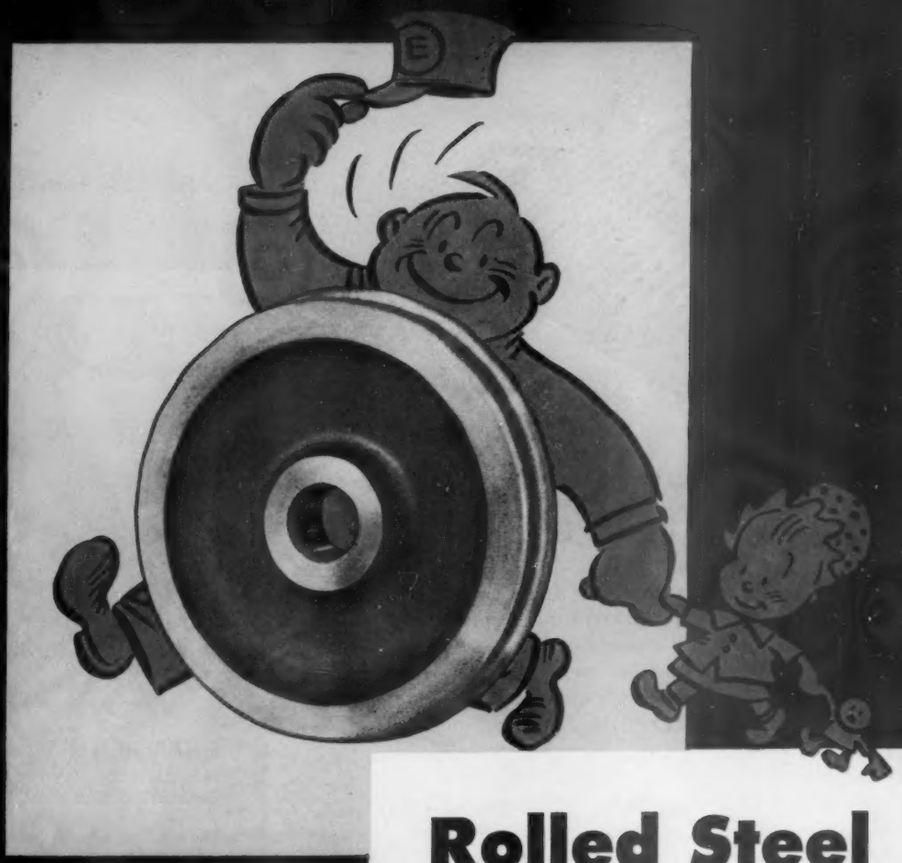
Your message will be imprinted by us on the cups you order for a very nominal charge. Ask for prices and samples.

UNITED STATES ENVELOPE COMPANY
GENERAL OFFICES • SPRINGFIELD 2, MASS.
14 Divisions from Coast to Coast

Edgewater

multiple wear

Passenger Car Wheels



Rolled Steel

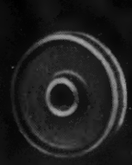
HEAT-TREATED OR UNTREATED

E

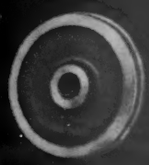
Edgewater Steel Company

P.O BOX 478 • PITTSBURGH 30, PA.

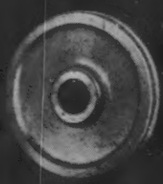
makers of



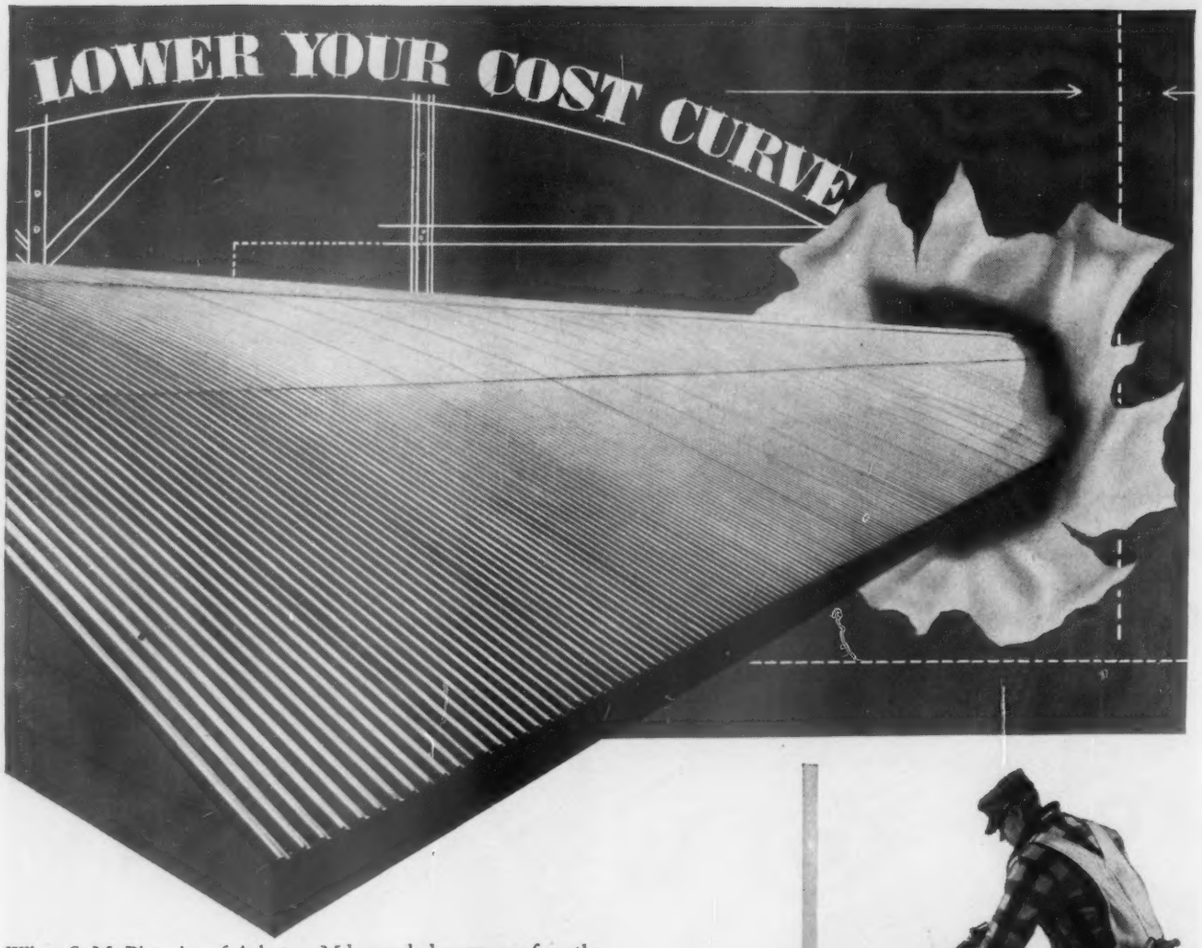
Freight Car



Passenger Car



and Diesel Locomotive **Rolled Steel Wheels**



When S. M. Pistorio, of Arbutus, Md., needed a new roof on the curved wood trusses of his big warehouse, he found he could save on initial cost and lower his cost curve through the years with Reynolds *Lifetime* Aluminum Industrial Corrugated.

In this case, 11-foot sheets were used, curved at the site. For other curved roofs, Reynolds can supply curved sheets on request—minimum radius 5′. However, this special use only serves to demonstrate the versatility of aluminum industrial corrugated. On any type of roof it gives the owner the advantages of freedom from rust without protective painting, plus the radiant heat reflectivity that keeps interiors cooler in summer, warmer in winter.

The lighter weight of this roof (56 pounds per square) was especially important on this wood-trussed warehouse. On new buildings this factor can mean substantial savings on framing.

Call Reynolds for technical assistance and application details . . . offices in principal cities. For literature, write to Reynolds Metals Company, Building Products Division, 2040 South Ninth Street, Louisville 1, Kentucky.

Specifications:

Thickness .032″
Corrugations 7/8″ deep, 2-2/3″ crown to crown
Uniform load support (roof) 80 p.s.f. on 4′ purlin spacing
Uniform wind load capacity (siding) 20 p.s.f. on girt spacing up to 7′9″
Roofing width 35″, coverage 32″
Lengths 5′, 6′, 7′, 8′, 9′, 10′, 11′, 12′

Military demands for aluminum reduce supply, but Reynolds is rapidly expanding aluminum capacity. Rated orders receive priority handling.

REYNOLDS *Lifetime* ALUMINUM INDUSTRIAL CORRUGATED

Tune in every week . . . "The Kate Smith Evening Hour" on Television—NBC NETWORK

UNION PACIFIC RAILROAD COMPANY

Fifty-Fifth Annual Report — Year Ended December 31, 1951.

TO STOCKHOLDERS OF UNION PACIFIC RAILROAD COMPANY:

The Board of Directors submits the following report for the year ended December 31, 1951, for Union Pacific Railroad Company, including Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company, whose properties are leased to Union Pacific Railroad Company. The lessor companies have certain income and charges and the figures in the Income Account, other than those relating to transportation operations, and in the Surplus Account and General Balance Sheet and tabulations and tables relating thereto are stated on a consolidated basis, *excluding offsetting accounts between companies.*

INCOME.

	1951.	1950.	Increase.	Decrease.
Transportation Operations.				
Operating revenues	$505,197,760.44	$465,283,516.36	$39,914,244.08	
Operating expenses	375,470,619.32	*327,651,611.92	47,819,007.40	
Revenues over expenses	$129,727,141.12	*$137,631,904.44	.....	$7,904,763.32
Taxes	77,114,792.02	76,541,751.14	$573,040.88	
Railway Operating Income	$52,612,349.10	*$61,090,153.30	.....	$8,477,804.20
Equipment rents (debit)	15,563,575.34	*15,168,748.90	$394,826.44	
Joint facility rents (debit)	1,397,484.55	1,462,272.05	.....	64,787.50
Net Income from Transportation Operations	$35,651,289.21	*$44,459,132.35	.....	$8,807,843.14
Income from Investments and Sources other than than Transportation Operations.				
Income from oil and gas operations—net†	$31,483,424.08	$23,902,997.87	$7,580,426.21	
Other income	8,324,771.66	*8,031,732.25	293,039.41	
Total	$39,808,195.74	*$31,934,730.12	$7,873,465.62	
Total Income	$75,459,484.95	$76,393,862.47	.....	$934,377.52
Fixed and Other Charges.				
Interest on funded debt	$5,368,574.94	$5,565,280.19	.....	$196,705.25
Other interest	430,831.72	379,319.90	$51,511.82	
Miscellaneous rents	25,470.02	28,334.60	.....	2,864.58
Micellaneous charges	769,256.72	659,377.79	109,878.93	
Total	$6,594,133.40	$6,632,312.48	.....	$38,179.08
Net Income from All Sources	$68,865,351.55	$69,761,549.99	.....	$896,198.44
Released from "Reserve against possible refunds on U. S. Government shipments"	6,894.42	226,982.16	.....	220,087.74
Total for Disposition	$68,872,245.97	$69,988,532.15	.....	$1,116,286.18
Per cent on par value of Capital Stock and average Surplus	8.23	8.80	.....	.57
DISPOSITION.				
Dividends on Preferred Stock of Union Pacific Railroad Company	$3,981,724.00	$3,981,724.00		
Surplus for Common Stock of Union Pacific Railroad Company	$64,890,521.97	$66,006,808.15	.....	$1,116,286.18
Per share on stock outstanding December 31st	$14.60	$14.85	.....	$.25
Dividends on Common Stock	26,674,920.00	26,674,920.00		
Transferred to Earned Surplus—Unappropriated	$38,215,601.97	$39,331,888.15	.....	$1,116,286.18

* Restated for comparative purposes because of reclassification, under I. C. C. order, of rental received from Pullman Company on sleeping cars lease to it.
† Excludes income taxes.

General Balance Sheet—Assets.

	December 31, 1951.	December 31, 1950.	Increase.	Decrease.
Investments:				
Road and Equipment	$1,281,792,134.46	$1,238,148,752.10	$43,643,382.36	
Less:				
Receipts from improvement and equipment fund	$23,823,091.13	$23,823,091.13		
Appropriations from income and surplus prior to July 1, 1907, credited to this account	13,310,236.52	13,310,236.52		
Total	$37,133,327.65	$37,133,327.65		
Road and equipment property	**$1,244,658,806.81**	**$1,201,015,424.45**	**$43,643,382.36**	
Donations and grants (Credit)	*$16,572,031.88*	*$14,015,057.23*	*$2,556,974.65*	
Reserve for depreciation—road and equipment (Credit)	*$213,811,198.18*	*$198,047,007.86*	*$15,764,190.32*	
Reserve for amortization of national defense projects (Credit)	*$59,398,536.25*	*$61,044,459.29*	.....	*$1,645,923.04*
Sinking funds	$2,563.75	$463.75	$2,100.00	
Capital and other reserve funds	$9,739.93	$9,463.35	$276.58	
Miscellaneous physical property	$37,280,960.61	$36,035,313.07	$1,245,647.54	
Reserve for depreciation—miscellaneous physical property (Credit)	*$19,444,433.68*	*$18,479,836.03*	*$964,597.65*	
Investments in affiliated companies:				
Stocks	$19,563,115.24	$20,312,013.24	.....	$748,898.00
Notes	288,918.68	296,190.40	.....	7,271.72
Advances	8,202,704.98	7,841,109.60	$361,595.38	
Total	$28,054,738.90	$28,449,313.24	.....	$394,574.34
Other Investments:				
Stocks	$63,343,395.87	$63,969,222.36	.....	$625,826.49
Bonds and notes	20,858,797.55	21,043,464.57	.....	184,667.02
Total	$84,202,193.42	$85,012,686.93	.....	$810,493.51
Reserve for adjustment of investments in securities (Credit)	*$33,444,603.22*	*$33,769,916.15*	.....	*$325,312.93*
Total Investments	**$1,051,538,200.21**	**$1,025,166,388.23**	**$26,371,811.98**	
Current Assets:				
Cash	$41,084,860.92	$57,051,719.88	.....	$15,966,858.96
Temporary Cash investments (U. S. Government securities)	56,400,000.00	56,343,204.51	$56,795.49	
Special deposits	126,908.50	191,870.14	.....	64,961.64
Loans and bills receivable	757.01	381.82	375.19	
Traffic and car-service balances—net	12,338,877.34	11,653,502.73	685,374.61	
Net balance receivable from agents and conductors	6,699,645.10	6,967,015.35	.....	267,370.25
Miscellaneous accounts receivable	22,063,981.57	26,910,561.34	.....	4,846,579.77
Materials and supplies	57,829,584.35	42,069,998.18	15,729,986.17	
Interest and dividends receivable	914,385.88	764,089.80	150,296.08	
Accrued accounts receivable	16,195,664.54	16,404,480.52	.....	208,815.98
Other current assets:				
Baltimore and Ohio Railroad Co. capital stock applicable to payment of extra dividend in 1914	104,877.30	105,129.30	.....	252.00
Miscellaneous items	3,143,133.67	388,165.84	2,754,967.83	
Total Current Assets	$216,903,076.18	$218,880,119.41	.....	$1,977,043.23
Deferred Assets:				
Working fund advances	$136,103.66	$133,182.84	$2,920.82	
Other deferred assets	1,032,690.44	1,430,694.54	.....	$398,004.10
Total Deferred Assets	$1,168,794.10	$1,563,877.38	.....	$395,083.28
Unadjusted Debits:				
Prepayments	$16,274.18	$19,517.76	.....	$3,243.58
Other unadjusted debits	2,097,239.19	1,217,201.95	$880,037.24	
Total Unadjusted Debits	$2,113,513.37	$1,236,719.71	$876,793.66	
Grand Total	**$1,271,723,583.86**	**$1,246,847,104.73**	**$24,876,479.13**	

General Balance Sheet—Liabilities.

	December 31, 1951.	December 31, 1950.	Increase.	Decrease.
Capital Stock:				
Common stock	$222,302,500.00	$222,302,500.00		
Preferred stock	99,591,580.79	99,591,580.79		
Total Capital Stock	$321,894,080.79	$321,894,080.79		
Funded Debt	204,453,789.15	215,396,183.21	.....	$10,942,394.06
Total Capital Stock and Funded Debt	$526,347,869.94	$537,290,264.00	.....	$10,942,394.06
Due to Affiliated Companies	$8,019,631.25	$11,990,170.47	.....	$3,970,539.22
Current Liabilities:				
Audited accounts and wages payable	$28,218,176.39	$25,270,020.81	$2,948,155.58	
Miscellaneous accounts payable	2,349,155.83	4,741,912.84	.....	$2,392,757.01
Interest matured unpaid (including interest due first proximo)	158,863.55	209,300.63	.....	50,437.08
Dividends matured unpaid:				
Dividends due but uncalled for	222,664.65	247,128.94	.....	24,464.29
Extra dividend on common stock declared January 8, 1914, payable to stockholders of record March 2, 1914, unpaid	113,161.16	113,413.16	.....	252.00
Dividend on common stock payable second proximo	10,003,095.00	10,003,095.00	.....	
Unmatured interest accrued	1,588,388.61	1,609,076.54	.....	20,687.93
Accrued accounts payable	19,848,714.81	16,890,822.35	2,957,892.46	
Taxes accrued	59,921,985.86	61,260,299.63	.....	1,338,313.77
Other current liabilities	2,240,529.29	2,455,180.80	.....	214,651.51
Total Current Liabilities	$124,664,735.15	$122,800,250.70	$1,864,484.45	
Deferred Liabilities	$7,789,558.74	$7,809,159.17	.....	$19,600.43
Unadjusted Credits:				
Premium on funded debt	$4,052,911.93	$4,265,171.42	.....	$212,259.49
Reserve for fire insurance	19,979,899.11	18,923,535.21	$1,056,363.90	
Reserve for depreciation—leased property	8,275.39	7,396.63	878.76	
Other unadjusted credits	1,033,925.79	2,393,542.55	.....	1,359,616.76
Total Unadjusted Credits	$25,075,012.22	$25,589,645.81	.....	$514,633.59
Total Liabilities	**$691,896,807.30**	**$705,479,490.15**	.....	**$13,582,682.85**
Surplus:				
Unearned surplus	$311,639.23	$311,639.23		
Earned surplus—appropriated:				
Additions and betterments	$28,522,352.23	$28,522,352.23		
Funded debt retired through income and surplus	9,141,429.91	7,936,647.41	$1,204,782.50	
Sinking fund reserves	2,563.75	463.75	2,100.00	
Reserve against possible refunds on U. S. Government shipments	1,690,753.72	1,697,648.14	.....	$6,894.42
Total Earned Surplus—Appropriated	$39,357,099.61	$38,157,111.53	$1,199,988.08	
Earned Surplus—Unappropriated	**$500,573,490.48**	**$463,314,316.58**	**$37,259,173.90**	
Total Earned Surplus	$539,930,590.09	$501,471,428.11	$38,459,161.98	
Total Surplus	$540,242,229.32	$501,783,067.34	$38,459,161.98	
As this consolidated balance sheet excludes all intercompany items, securities of the Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company owned by other System companies are not included. The difference between the par and face value of such securities as carried on the books of the issuing companies (less unextinguished discount on the bonds and discount charged to Earned Surplus—Unappropriated but added back in consolidating the accounts) and the amounts at which the securities are carried on the books of the owning companies is set up here to balance	$39,584,547.24	$39,584,547.24		
Grand Total	**$1,271,723,583.86**	**$1,246,847,104.73**	**$24,876,479.13**	

Investment in Road and Equipment Property.

Charges:		
*Extensions and branches	.....	$2,713,674.38
Additions and betterments (excluding equipment):		
Roadway, track, and appurtenances	$9,637,599.77	
Buildings, structures, and appurtenances	4,294,713.14	13,932,312.91
Equipment:		
Purchased	$21,470,293.65	
Built in Company's shops	10,225,294.02	
Rebuilt or converted in Company's shops	336,571.58	
Improvements to existing equipment	1,235,406.80	33,267,566.05
Total		$49,913,553.34
Credits:		
Cost of road property retired and not replaced	$967,058.05	
Cost of equipment retired (including equipment rebuilt or converted)	5,303,112.93	
Total		6,270,170.98
Increase in investment in "Road and Equipment Property"		$43,643,382.36

*Branch lines between Walcott and Encampment, Wyoming, 44 miles, and between Laramie, Wyoming, and Coalmont, Colorado, 112 miles, acquired in liquidation of Saratoga & Encampment Valley Railroad Company and Laramie, North Park & Western Railroad Company, respectively, wholly owned affiliated companies.

(ADVERTISEMENT)

Above — Two views of Drawing Rooms in The Morning Congressional, The Senator and The Afternoon Congressional cars, showing Met-L-Wood doors, partitions and trim.

in Budd-Built Passenger Cars for Pennsylvania Railroad's New "Congressionals" and "Senator"

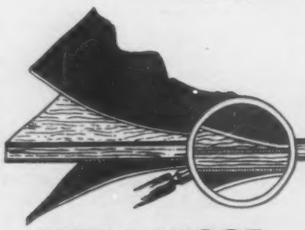
● Met-L-Wood used in the Pennsylvania Railroad's Budd-Built passenger cars for The Morning Congressional, The Senator and The Afternoon Congressional has these important advantages for builders, railroads and passengers:

Fabrication with Met-L-Wood is fast . . . Prefabricated doors, partitions and panels simplify assembly and save labor costs . . . and standard Met-L-Wood panels can be drilled, sawed, tapped or routed without special tools.

Lighter weight, as compared with equivalent all-steel construction, reduces overall car weights, lowers gravity centers—makes for lower operation and maintenance costs.

Inherent beauty of Met-L-Wood is backed by vibration damping, sound deadening and insulating qualities to add to passenger comfort in smart, modern surroundings.

Details on Met-L-Wood uses in passenger cars, baggage cars and cabooses will be furnished promptly on request.



MET-L-WOOD CORPORATION

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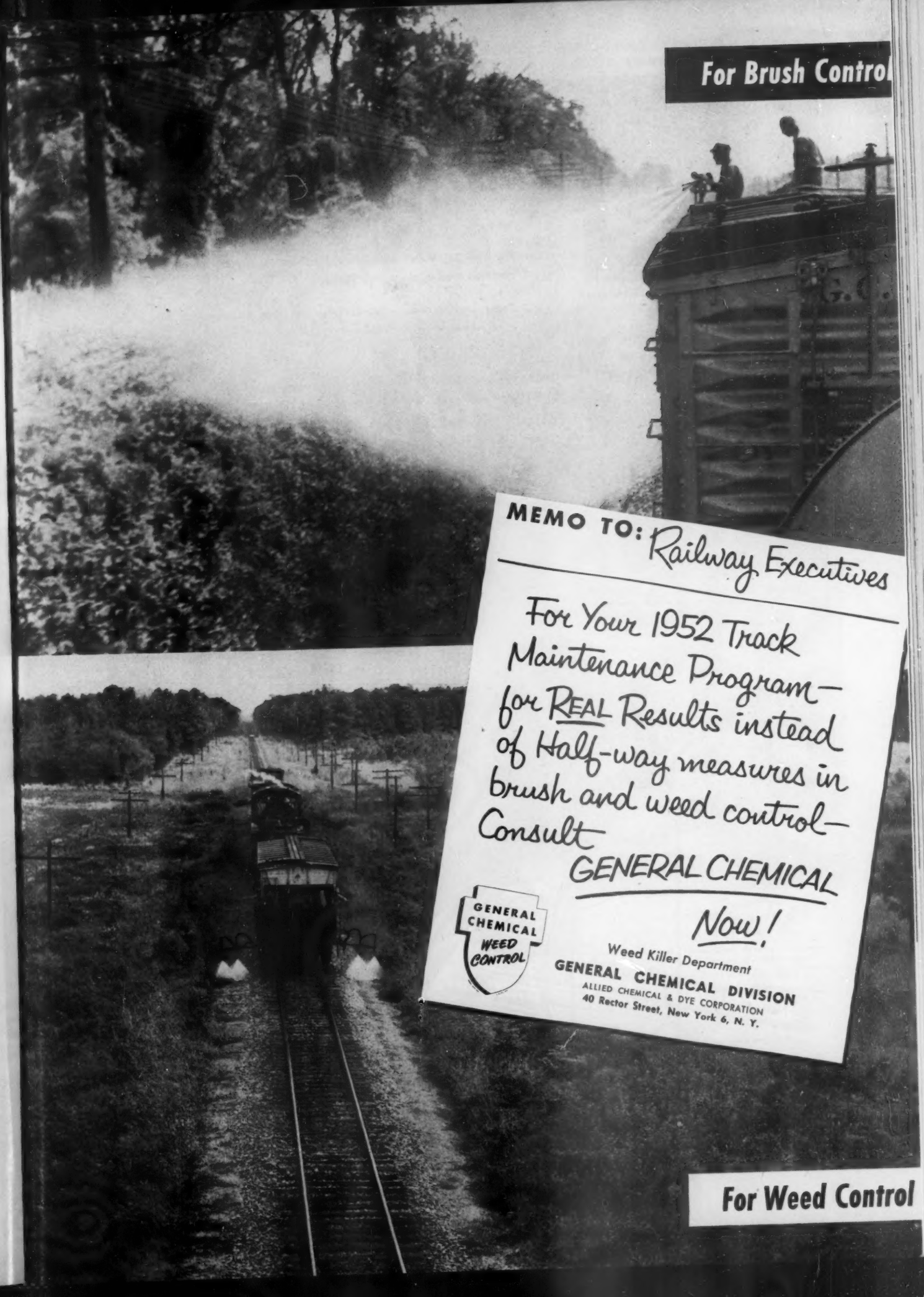
MET-L-WOOD • *STRONG... LIGHT... Smooth Finish... Sound Deadening... Fire-Resisting... Insulating*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MEMO TO: Railway Executives
For Your 1952 Track Maintenance Program— for REAL Results instead of Half-way measures in brush and weed control— Consult GENERAL CHEMICAL Now!
GENERAL CHEMICAL WEED CONTROL
Weed Killer Department
GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.
For Weed Control

The Yardmaster's office equipped with Sensicon—*permanent* sealed selectivity. Eliminates 15 nuisance adjustments and is immune to channel changes. Six engines are two-way Motorola equipped; The Cotton Street Yardmaster has instantaneous contact for industrial and flat yardswitching.

From the car-checker's Handie-Talkie to these Bill clerks using Motorola Uni-Channel AC Dispatcher type units, two-way contact speeds the line-up of cars. Information flows back and forth on four channels simultaneously *without interference*. As soon as last car is checked, wheel report is made up and train leaves almost immediately!

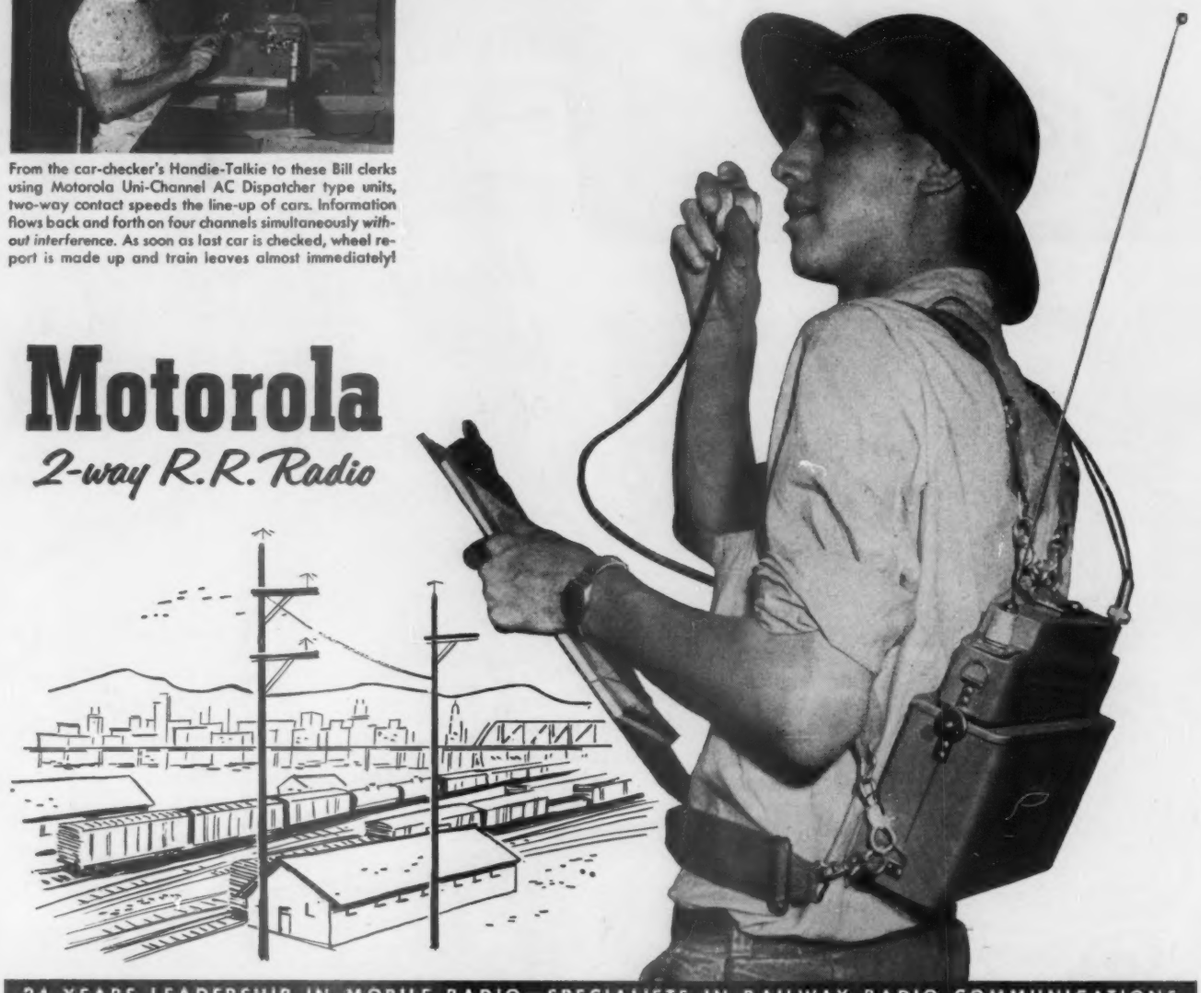
MOTOROLA HELPS T. & N. O.

move 'em up faster

The Best-Buy-Value of Motorola railway radio equipment is being demonstrated again on the T&NO.

Better performance, rugged durability, low maintenance plus eight obsolescence-proof features distinguish Motorola, especially on the railroads as the *set with the FUTURE.*

Leading specialist in this and all other industrial fields, Motorola offers you complete coverage of yard and terminal, end to end, wayside to train, train to train, wayside to wayside, *car checking* and maintenance of way . . . with mobile, portable, point-to-point Microwave and Carrier equipment!



Motorola

2-way R.R. Radio

24 YEARS LEADERSHIP IN MOBILE RADIO—SPECIALISTS IN RAILWAY RADIO COMMUNICATIONS

Motorola Inc. COMMUNICATIONS & ELECTRONICS DIVISION, 4545 AUGUSTA BLVD., CHICAGO 51

Sweat-Resistant Bol Tan
leather insole stays soft and pliable

These two bottoms, from one pair of shoes, were worn in a foundry for 7 months. The left shoe has a Bol Tan Leather Insole, the right one an ordinary insole.

Results speak for themselves. Only the Bol Tan Leather Insole resists the damaging attacks of perspiration.

Note Bol Tan Leather Insole remains soft and pliable as demonstrated by section cut and lifted for inspection.

Ordinary insole is cracked, curled, saw-edged and dried out . . . damaged by perspiration.

Bol Tan Insole remains comfortable, permits re-soling when ordinary leather insoles would have failed!

Ordinary insole is unfit for further wear. Result: Shoe is discarded long before uppers are worn out!

Only Hy-Test has Bol Tan

Sweat-Resistant leather insoles

a PLUS value at NO EXTRA COST means up to twice the wear and extra comfort, too!

Be sure your worker's feet are protected by HY-TEST Safety Shoes . . . and you make sure of foot comfort that pays off in productive man hours. You also save workers money they spend for extra pairs to match the longer wear Bol Tan leather insoles assure in HY-TEST SAFETY SHOES.

H497.. Men's Brown Blucher Oxford. Anchor Flange Wingard Steel Toe, Weatherwear Sole, ½ Rubber Heel, Steel Arch.

H222-4. Men's Brown Steel Toe Blucher, Resist-Oil outsole, Leather midsole, Whole Resist-Oil Heel, Steel Arch.

HY-TEST SAFETY SHOES

HY-TEST ANCHOR FLANGE* SAFETY SHOES

*TRADEMARK REG. U. S. PAT. OFF.

The World's Largest Selling Safety Shoe

Division of International Shoe Company, St. Louis 3, Mo.

New York Office: Suite 1708, 225 W. 34th St.

Use this handy coupon for details on HY-TEST's Bol Tan leather insoles.

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Please send me free copy of your folder explaining the advantages of Bol Tan leather insoles.

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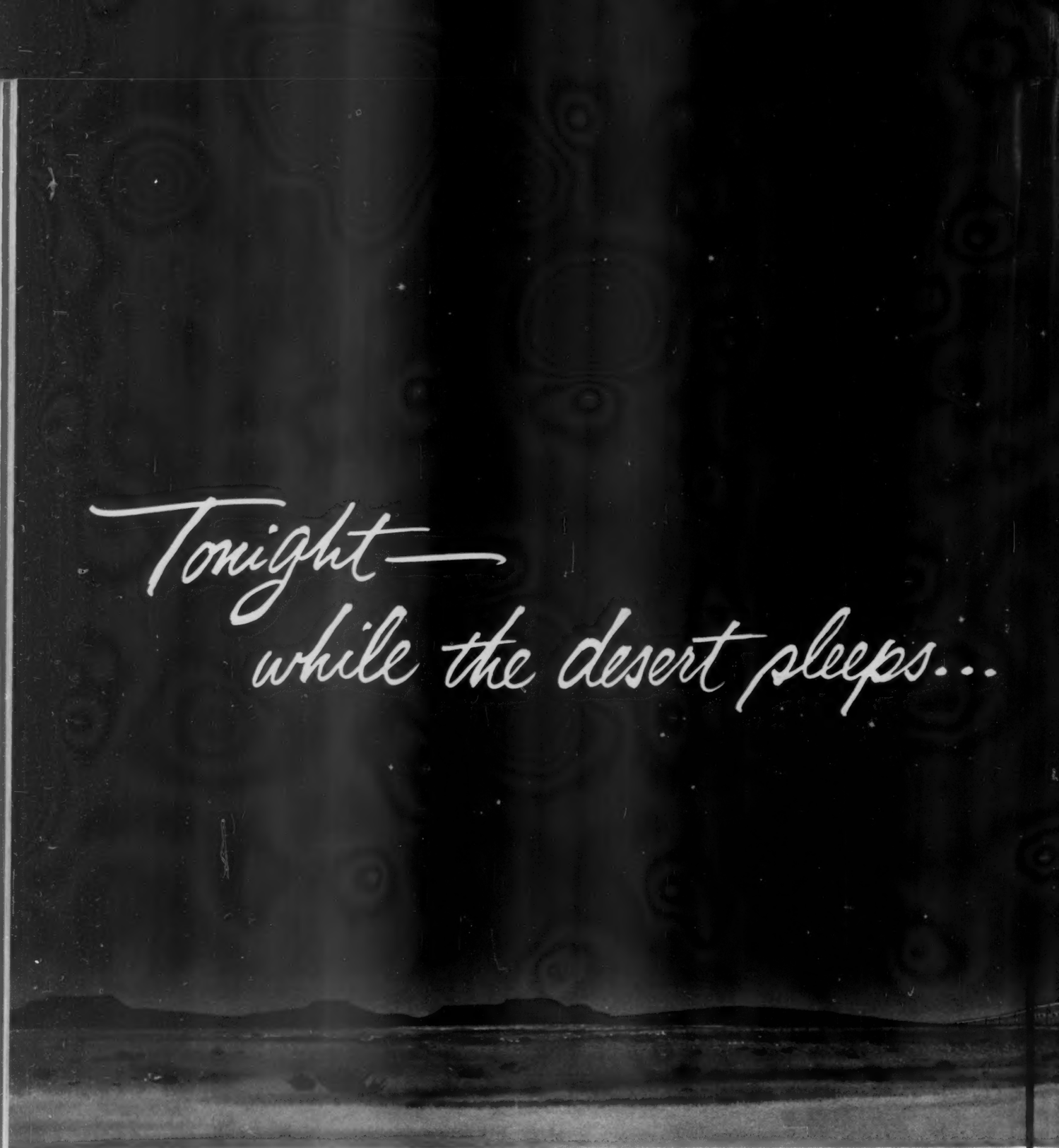
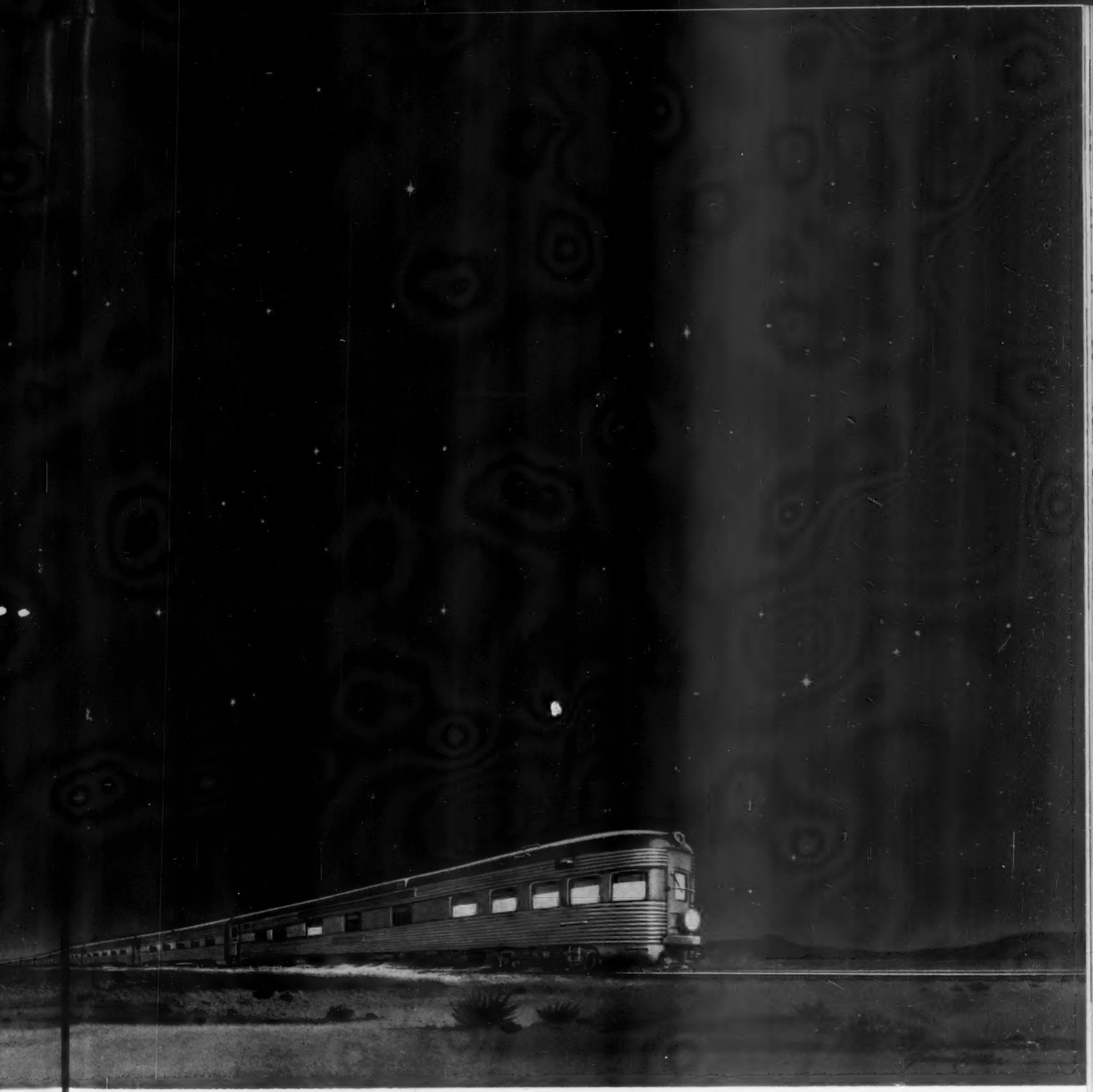


Tonight while the desert sleeps, another world rushes by. Inside this wheeled city a porter yawns, a salesman works far into the night, a family vacations, and an old man remembers. For all their differences, the people who make up this fleeting universe are as comfortable as if they were home.

In a sense they are. For the iron horse of today has left behind the inconveniences of travel we used to know. From easy chair to telephone, modern trains have become the easiest,

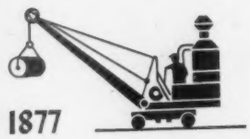


most comfortable distance between two points. They keep just one token from the past: an outstanding record of safely transporting people where they want to go, *when* they want to go.

In the years to come, a.c.f. will continue to play an important part in the creation of even better transportation by rail. American Car and Foundry Company, New York · Chicago St. Louis · Washington · Cleveland · Philadelphia · San Francisco.

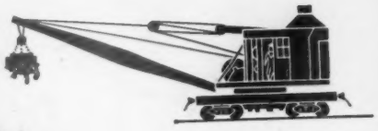
CAR BUILDERS TO AMERICA'S RAILROADS a.c.f.

BROWNHOIST
finest, most modern CRANE . . . the result of 75 years of progressive engineering



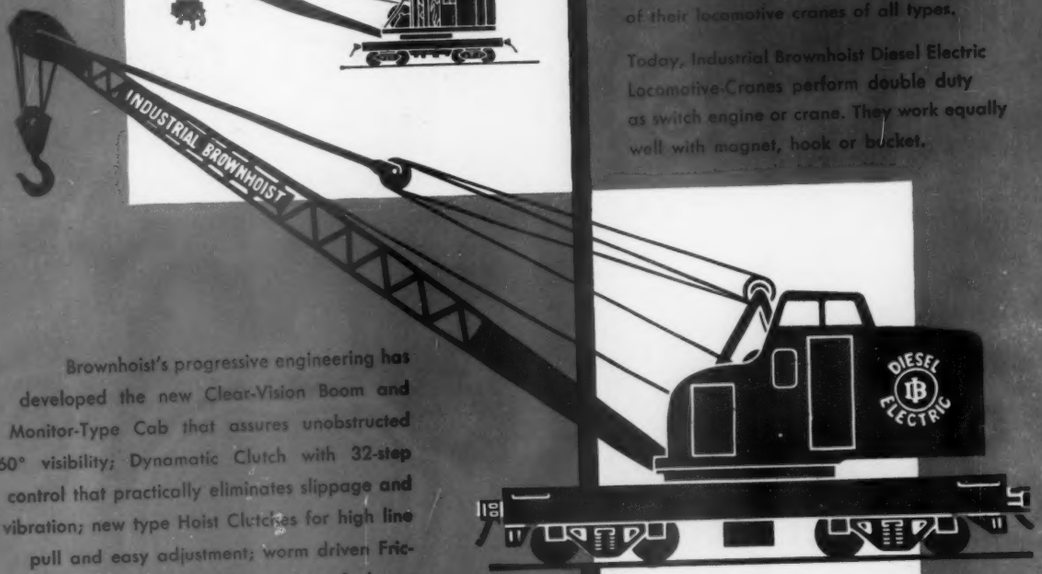
1877

1927



Even in 1877 the first little coal-fired Brownhoist cranes were known as the best locomotive cranes of their day. Every year since, Brownhoist engineering has constantly improved the construction, design, and performance of their locomotive cranes of all types.

Today, Industrial Brownhoist Diesel Electric Locomotive-Cranes perform double duty as switch engine or crane. They work equally well with magnet, hook or bucket.



1952

Brownhoist's progressive engineering has developed the new Clear-Vision Boom and Monitor-Type Cab that assures unobstructed 360° visibility; Dynamatic Clutch with 32-step control that practically eliminates slippage and vibration; new type Hoist Clutches for high line pull and easy adjustment; worm driven Friction Clutch Boom Hoist for smooth, safe boom operation. Optional features on Brownhoist cranes today include Dual Controls, 8-Wheel Chain Drive for increased drawbar pull, Twin Engine Drive for greater traction and Timken Roller Bearing Journals. Brownhoist Diesel-Electric Locomotive Cranes are available in capacities from 30 to 80 tons.

BROWNHOIST builds better cranes

CLAMSHELL BUCKET

250 TON WRECKING CRANE

COAL-ORE BRIDGE

CAR DUMPER

INDUSTRIAL BROWNHOIST CORPORATION • BAY CITY, MICHIGAN • DISTRICT OFFICES: New York, Philadelphia, Cleveland, San Francisco, Chicago, Canadian Brownhoist, Ltd., Montreal, Quebec • AGENCIES: Detroit, Birmingham, Houston, Los Angeles

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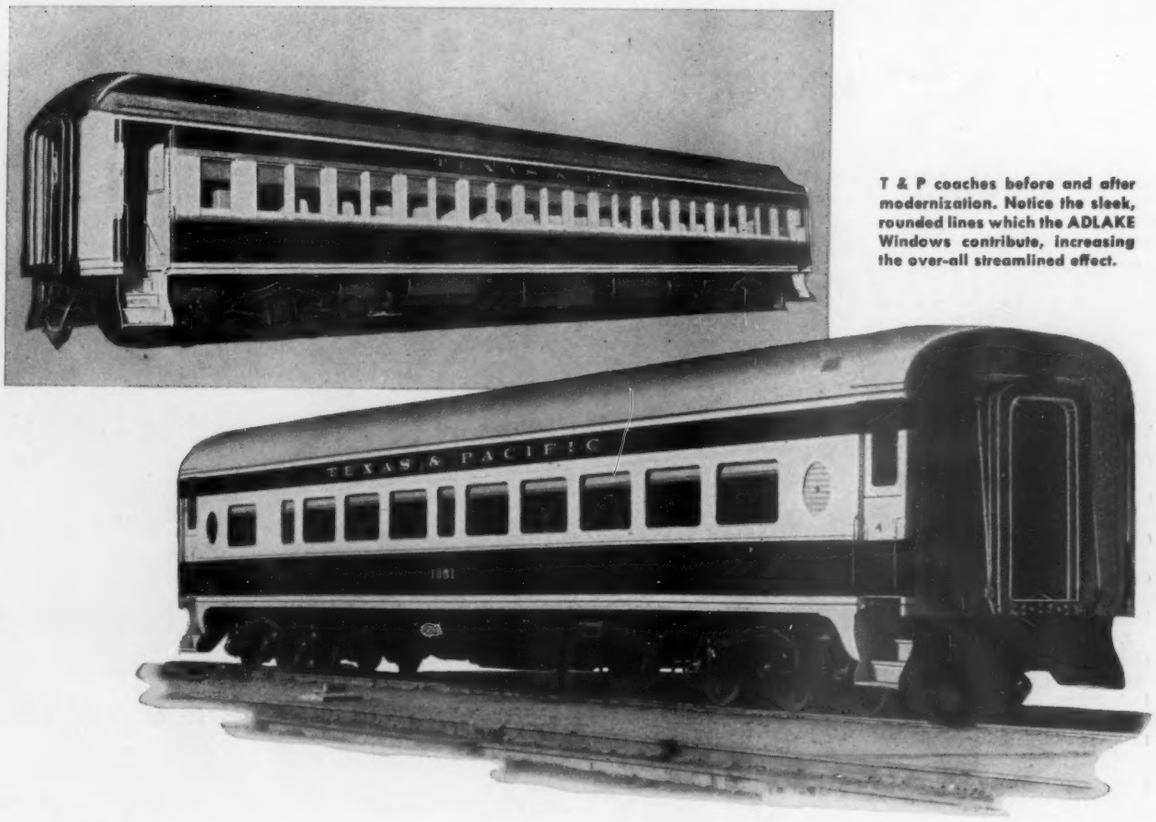

T & P coaches before and after modernization. Notice the sleek, rounded lines which the ADLAKE Windows contribute, increasing the over-all streamlined effect.

Adlake "BREATHER" WINDOWS

add new beauty to reconditioned cars

Texas & Pacific's new reconditioned cars are visual proof of the important part ADLAKE "Breather" Windows can play in modernization programs. Not only do they increase passenger comfort and curtail window maintenance costs, but they add new, streamlined beauty to both exteriors and interiors!

ADLAKE "Breather" Windows remain always sparkling clear, regardless of change in temperature or humidity. They require no maintenance other than routine washing . . . contain no dehydrants . . . and if they are broken in service, only the broken glass need be replaced!

In addition to ADLAKE Windows, the Texas & Pacific also used ADLAKE hardware in reconditioned car interiors.

Let us show you how ADLAKE Windows and Specialties will help you in your modernization program. Drop a card to The Adams & Westlake Company, 1109 N. Michigan, Elkhart, Indiana.

Adlake 95th year of serving the transportation and building industries

THE Adams & Westlake COMPANY

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On Smart Trains across America...TWIN CUSHIONS ASSURE THE UTMOST IN RIDING COMFORT...

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"400"
Great Northern
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PHOEBE SNOW
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THE HUMMINGBIRD
Missouri Kansas Texas
TEXAS SPECIAL
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CITIES OF SAN FRANCISCO AND LOS ANGELES

For the elimination of jerks and jars—for the ultimate in smooth riding-comfort, smart streamliners of America are, with few exceptions, Waughmat Twin Cushion equipped.

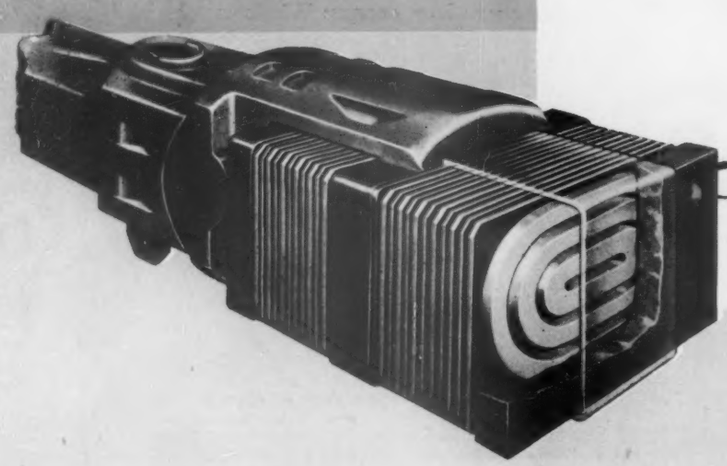
ON OPPOSITE PAGE...

WITNESS ONE OF NEWEST TRAINS TO BE EQUIPPED WITH

WAUGHMAT

Twin Cushions

TRADE MARK REGISTERED



TWENTY YEARS SERVICE EXPERIENCE ON AMERICAN RAILROADS

THE NEW *Congressionals and The Senator...*

NO FINER TRAINS EVER BUILT.

The Morning Congressional, The Senator and the Afternoon Congressional, newest Pennsylvania Railroad trains of Budd-built cars, comprise all that is finest — all that is most luxurious in railway transportation.

All cars on these trains are equipped with Waughmat Twin Cushions. Thanks to Twin Cushions there is no jerk when trains start, no jolt when trains stop, no jars while they are rolling. Again, Twin Cushions prove their place . . . selected for the reason that they are recognized as the world's finest car cushioning device.

WAUGHMAT

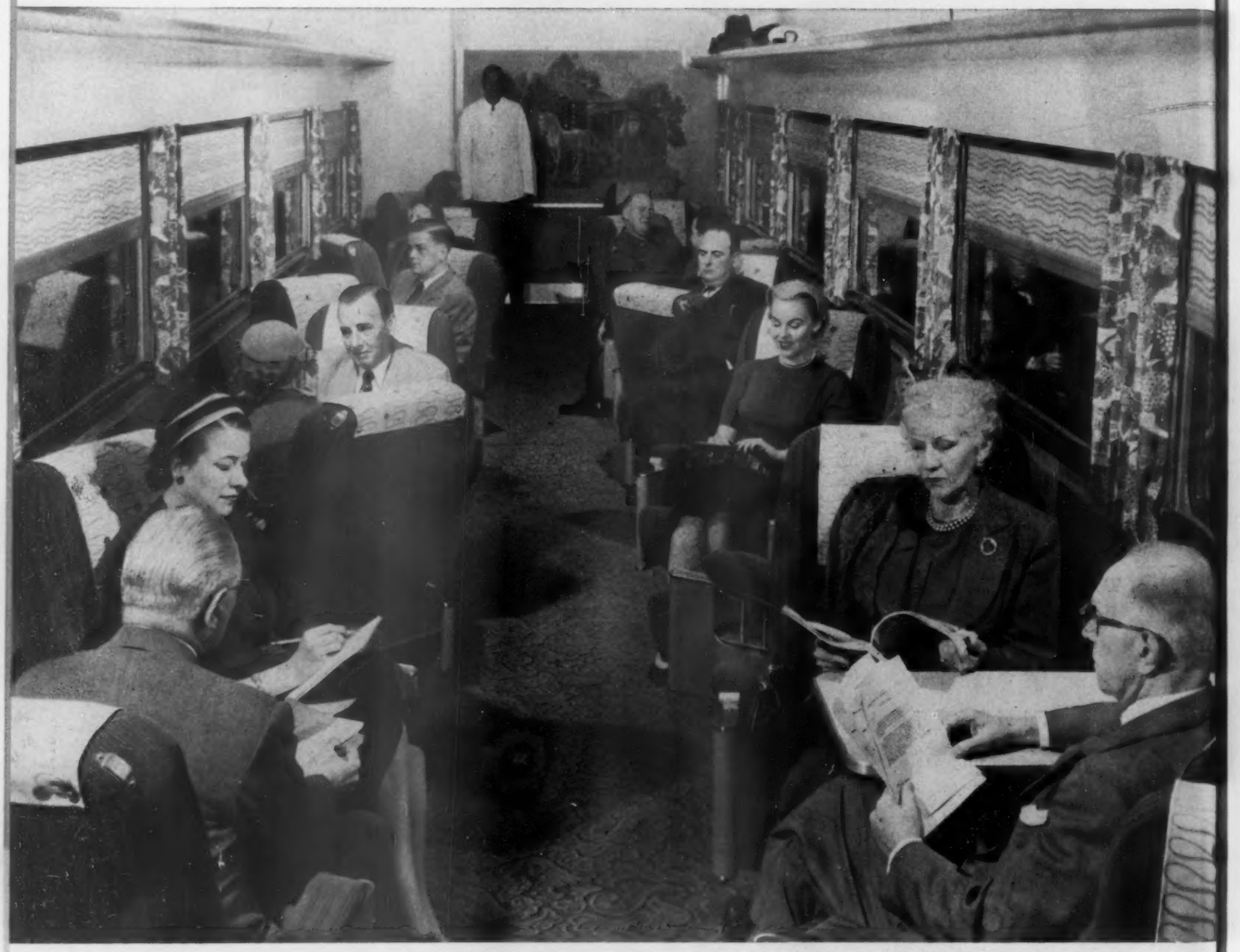
Twin Cushions

TRADE MARK REGISTERED

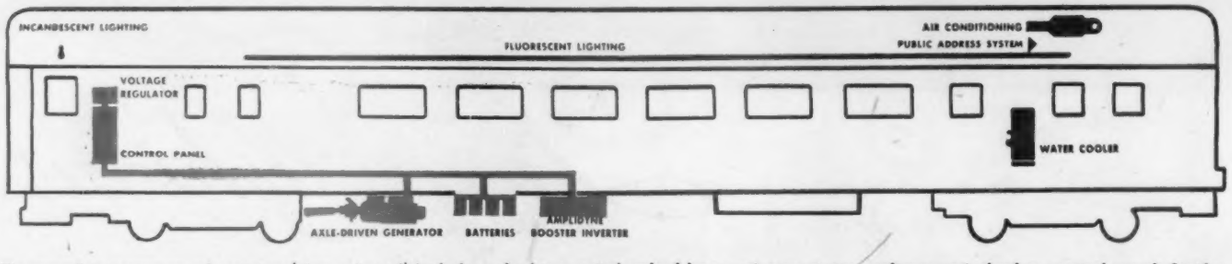
WAUGH EQUIPMENT COMPANY, *NEW YORK, CHICAGO, ST. LOUIS* · CANADIAN WAUGH EQUIPMENT COMPANY, *MONTREAL*

Pennsylvania's New Luxury Cars on "Congressionals"

Budd-built units for "Morning Congressional," "Senator" and "Afternoon Congressional" have last word in passenger conveniences, including improved air conditioning, unusual fluorescent lighting, and public address system



EVERY EFFORT WAS MADE TO PROVIDE THE UTMOST IN PASSENGER COMFORT, WITH EMPHASIS ON LIGHTING AND AIR CONDITIONING.



The complete power-supply system (shown in red) includes a body-mounted axle-driven motor-generator, voltage-control relay, control panels for the generator, start-stop push-button, and amplidyne booster inverter.

and "Senator" Equipped with G-E Axle-Driven Generators

In keeping with the luxurious character of the new Budd-built equipment for the "Morning Congressional," the "Senator" and the "Afternoon Congressional," Pennsylvania Railroad has provided for electrical apparatus that is second to none for the comfort and convenience of the passengers. Reliable performance of such important facilities as fluorescent lighting, air conditioning, and public-address system requires a dependable source of electric power. This is furnished by General Electric axle-driven motor-generators and amplidyne booster inverters on the 56 coaches, parlor drawing room, observation cars, and full length diners.

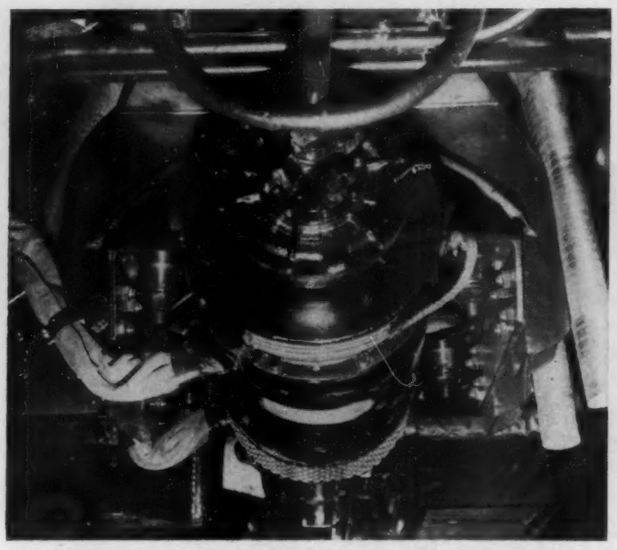
These motor-generators provide ample power to operate electrical facilities furnishing services which appeal to passengers. Full output over a wide range of train speeds reduces demand on battery power and provides high, safe charging currents for low batteries. These proved-in-service conventional d-c power units also have adequate reserve capacity to keep the batteries adequately charged during normal train operation. Rated power capacity is available at low train speeds. Available capacity increases with speed. The units are built for low-cost maintenance and long periods of trouble-free service.

In the complete line of G-E axle-driven motor-generators there is a rating that will provide a power supply to meet your equipment requirements. Over 4000 G-E axle-driven equipments have already been built. Also, 31 G-E service shops are strategically located around the country to help you with your maintenance problems. Ask your G-E representative for complete information about G-E axle-driven motor-generators. *General Electric Co., Schenectady 5, N. Y.*

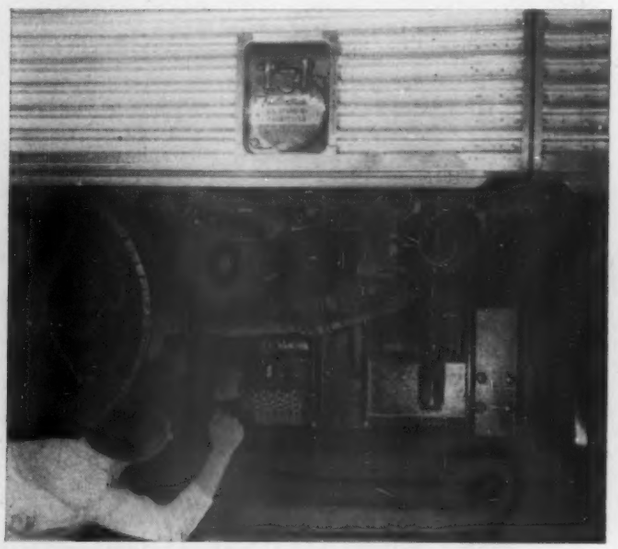
PERFORMANCE CHARACTERISTICS OF G-E AXLE-DRIVEN GENERATORS

Motor-generator, Type GMG	150A6	150A4	150A7	150A9
Generator Rating, kw	20–25	20–25	30–35	25–30
regulated volts	37.5	75	75	134
amp (125% min. full load speed)	535	267	414	187
Nominal induction motor rating, hp	25	25	25	25
Min. Speed for 85% Voltage, rpm (no load)	520	520	690	590
Min. Speed for 100% Voltage, rpm (full load)	690	690	915	780
Max. Permissible Speed	*3780	3600	3780	*2470
MAXIMUM CURRENT (AXLE-DRIVEN)				
Current Limit Cut-in—nominal, amp (min. full load speed)	562	286	395	185
Current Limit Cut-in—nominal, amp (max. operating speed)	760	387	533	250
Max. Amp at Max. Operating Speed —nominal (85% voltage)	912	465	640	300
MAXIMUM CURRENT (MOTOR-DRIVEN)				
Current Limit Cut-in, amp (nominal)	402	207	207	116
Max. Amp. 85% voltage (nominal)	490	253	253	141

*All P.R.R. machines have 2.54 gear ratio which produces an operating speed of 1900 RPM at 80 MPH.



The General Electric axle-driven motor-generator has a capacity of 25–30 kw and is directly connected to a 25-hp, 220-volt, 3-phase, 60-cycle motor. The system is rated at 110 volts (nominal).



Inspection and servicing are simplified by the accessible location of the axle-driven motor-generator. Standby power in yards or terminals is provided through receptacles that supply 220-volt, 3-phase, 60-cycle power for driving the motor-generator.

You can put your confidence in—

GENERAL ELECTRIC

122-13

Two words that mean railroad travel <u>at its best</u>—

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Pittsburgh's Alkali and Acid-Resistant CARHIDE...

Provides better protection and longer life for covered hopper cars!

● One of the hundred covered hopper cars refinished with alkali- and acid-resisting CARHIDE in use for several years by the Rock Island Lines.

YOU can now give added years of service to covered hopper, refrigerator and tank cars with Pittsburgh's alkali- and acid-resisting CARHIDE.

● **This new product** of Pittsburgh's leadership in paint research now makes possible an entirely new degree of protection against the effects of cargoes which quickly destroy ordinary finishes.

● **A number** of leading railroad lines have tested this finish on several hundred cars for periods from one to five years with highly satisfactory results. Tests have demonstrated that such ladings as soda ash, sulphur, phosphates, cement, lime, common salt, alkalis, crude oil and alcohol will not affect it. Furthermore, it has shown high resistance to abrasion as well as to repeated scrubbings.

● **This new CARHIDE** dries as quickly as lacquer—you can maintain one-day finishing schedules.

● **If your line** has cars used to carry corrosive cargoes it will pay you to investigate this new alkali- and acid-resistant CARHIDE. Call on us for suggestions and advisory service.

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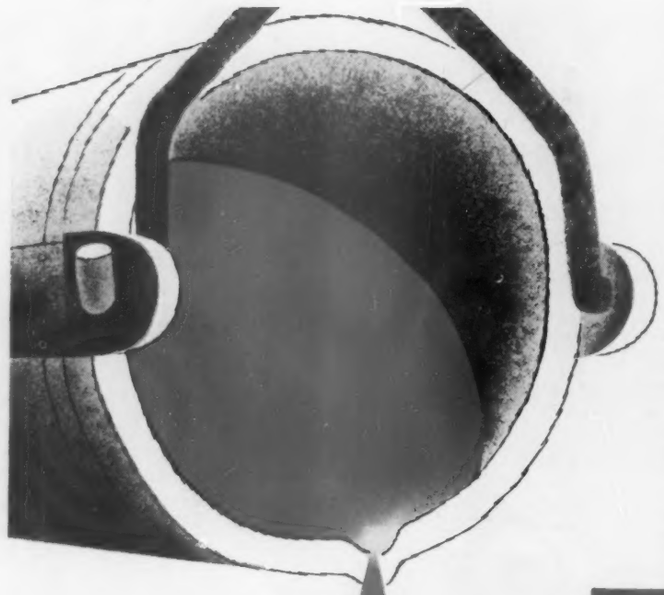


Why a **poured**

car wheel is

HARD

SOFT

WEAR-RESISTANT

RESILIENT

TOUGH *all at once . . .*

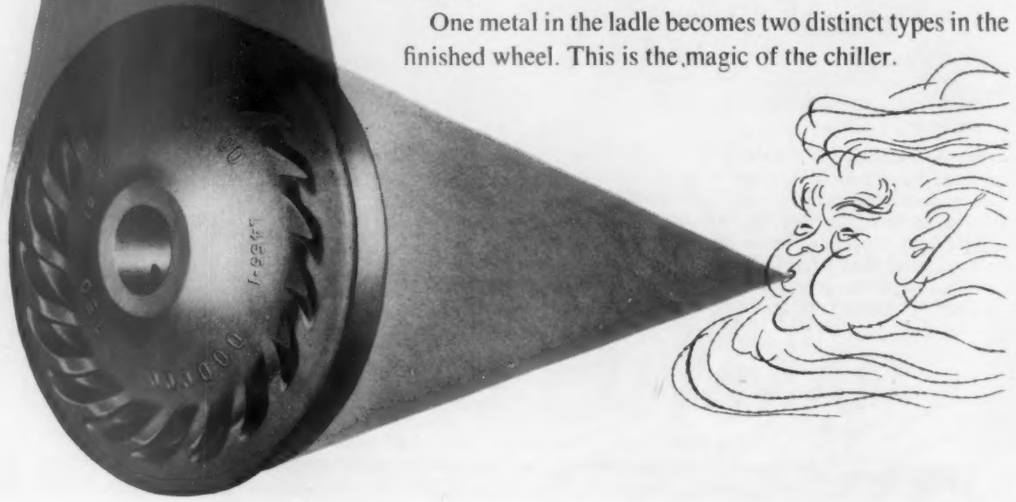
the answer is the magic of the chiller

Here is a wheel, poured from a single, carefully controlled iron mixture, that solidifies into a blend of irons ideally suited to car wheel performance.

The chiller—a ring of iron inside the mold—quickly draws heat from the outer rim of the molten wheel. Carbon particles remain combined with the iron as iron carbide, and the rim of the wheel becomes harder than steel . . . making a tread that will not flow under the heaviest of loads.

The center portion of the wheel cools and solidifies more slowly, permitting carbon to separate from the iron and leaving a softer iron, easy to bore, yet tough and resilient enough to dampen the shocks that occur in wheel service.

One metal in the ladle becomes two distinct types in the finished wheel. This is the magic of the chiller.



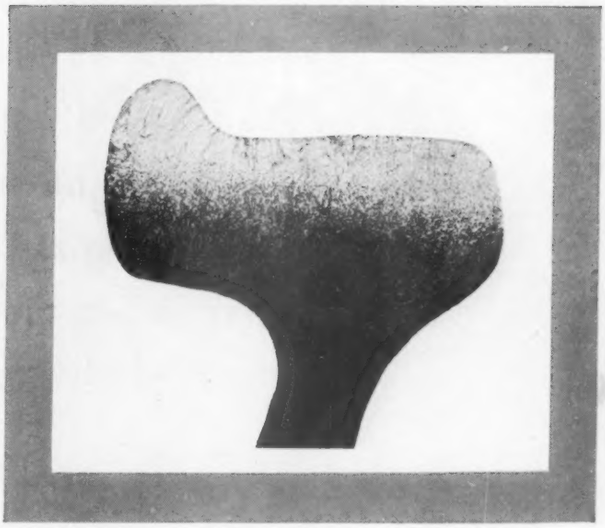
10-year record of improved values

1941-1946 . . . Improved control of mottled iron formation, providing clearer chill at tread and more impact-resistant gray iron backing.

1945 . . . AMCCW plants adopt limitation on chill depth in rim (see cross-section, opposite). Rim thickness increased for greater strength.

1947 . . . More rigid inspection and standards for rotundity, improved quality of wheels shipped from AMCCW plants.

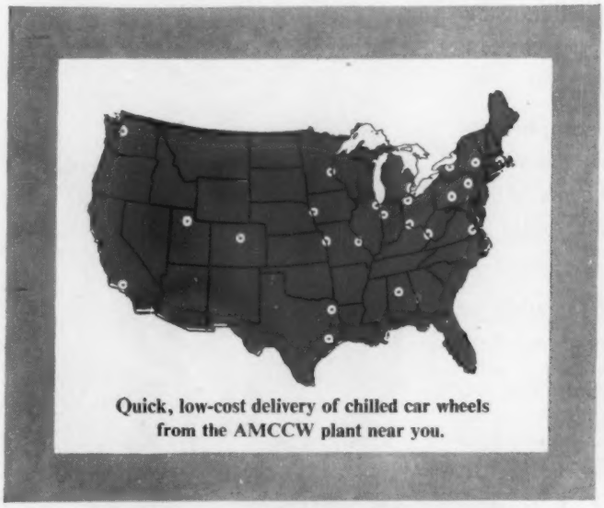
1950 . . . New wheel design features heavier tread (stronger flange and rim) and more brackets (thicker, heavier, more continuous flange support).



How AMCCW wheels save money for railroads

The railroad that runs its freight cars on AMCCW wheels saves money on every wheel it buys. Boring is faster, easier on cutting tools. Mounting requires less pressure, less exacting specifications. Prompt, short-haul delivery schedules permit the railroad to maintain a minimum inventory—and a smaller inventory is just as good as money in the bank.

You *know* you can get the wheels you want from the AMCCW plant on or near your line—in a matter of days.



Quick, low-cost delivery of chilled car wheels from the AMCCW plant near you.

The cross-section of an AMCCW wheel, illustrated above, shows the uniform depth of chilled iron that extends from the flange across the entire tread to a depth of not less than ⅜ of an inch, nor more than 1⅛ inches. This white iron is literally harder than the steel rail it rides upon.

Note how the softer, more resilient gray iron has been brought close to the white iron for maximum shock absorption. This tough gray iron extends on through the plate, brackets, and hub of the wheel.

Continuous research

When you specify AMCCW chilled car wheels you get this ideal combination of qualities: hard, long-wearing metal on the tread, resilient shock-absorbing gray iron in the plate, easy-to-machine hub section, all cast into one integral unit.

You get near-perfect uniformity, too, and the advantages of improvements as they are born of research, developed, and approved for production. It all spells millions more car miles without failures. That's why it pays in safety and economy to insist on AMCCW car wheels for freight car service.

In good supply
Available locally
Short-haul delivery
Reduced inventory
Low first cost
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Increased ton mileage
High safety standards
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. . . a complete line to meet every need — including yours

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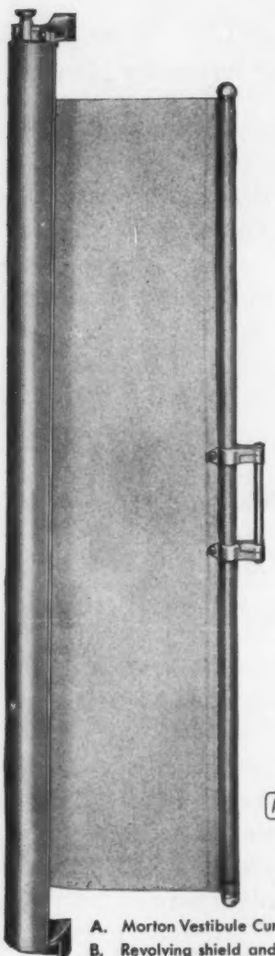
- **ROLLERS.** Long, strong spring of toughest spring steel. Roller barrel of cold-rolled steel tubing, welded and swaged. Available in adjustable and non-adjustable types, grooved or plain, with or without snap-button holes. Painted.
- **CURTAIN MATERIAL.** Any designated type of material or color can be provided.
- **HANDLES.** Designed for easy application to, or removal from, curtain rod. Release handles supplied if specified.
- **REVOLVING SHIELD and CASING** (illustrated at right). When opened, it gives quick access for installation or repair; when in normal closed position, it presents an attractive appearance.
- **SNAP-BUTTON FEATURE.** Should cars be uncoupled before curtain is unhooked, the snap buttons which hold curtain to roller become disengaged by the extra "pull," preventing damage to curtain. Buttons are easily re-snapped to roller.
- **HOOKS.** Malleable curtain hooks (single, double or roller type) can be furnished to any specification.
- **BRACKETS.** Various types of brackets of simplified design available for any condition of application.



A. Morton Vestibule Curtain outfit.
B. Revolving shield and casing (shield open).
C. Revolving shield and casing (shield closed).

When you buy vestibule curtains for passenger trains, *by all means specify* MORTON *Vestibule Curtains!*

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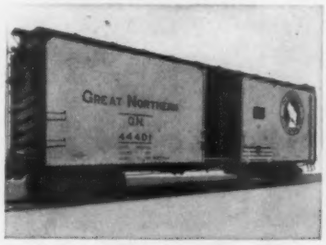
CAR CONSTRUCTION



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Only plywood gives you all 6

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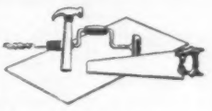
2 Cross Laminated Strength

3 Attractive Appearance



4 Workability

5 Tested Quality

6 Light Weight

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into thin wood sheets which are inseparably cross-laminated

to form large, light panels having beauty and great strength

Douglas Fir Plywood

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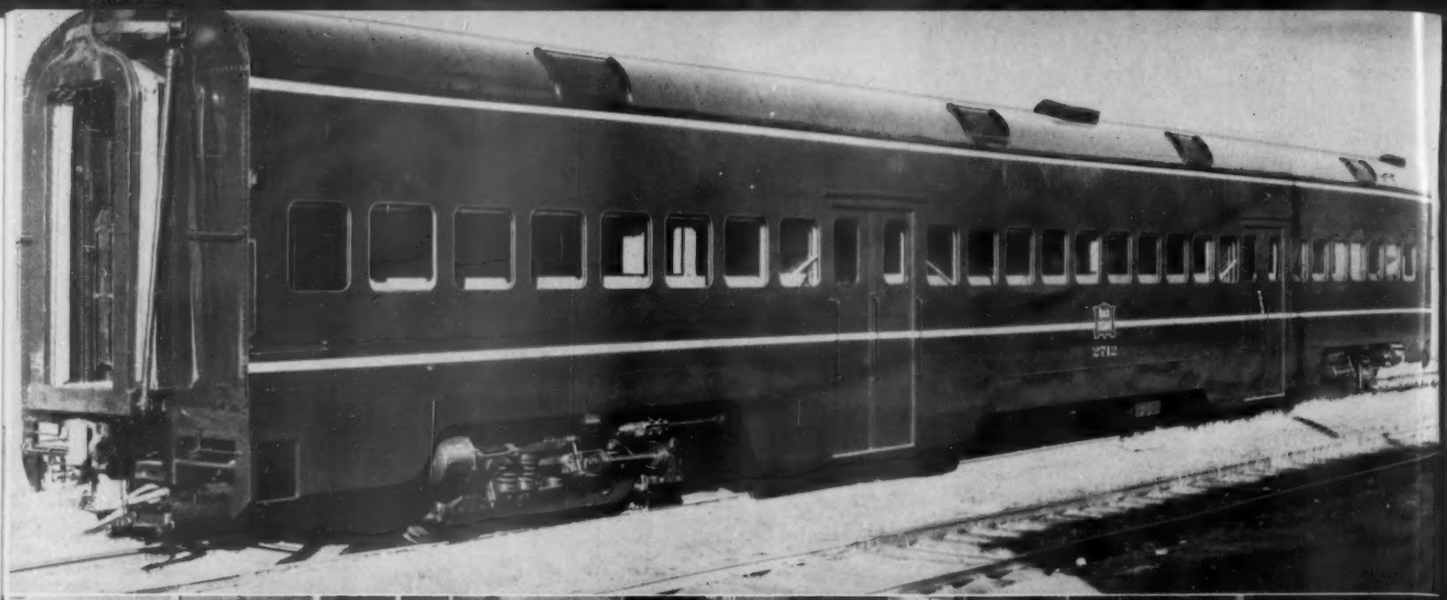
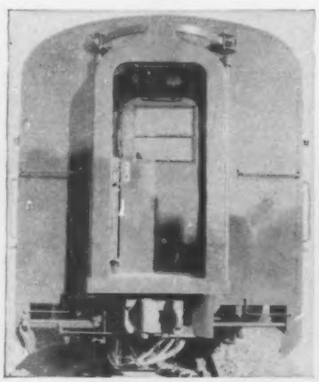
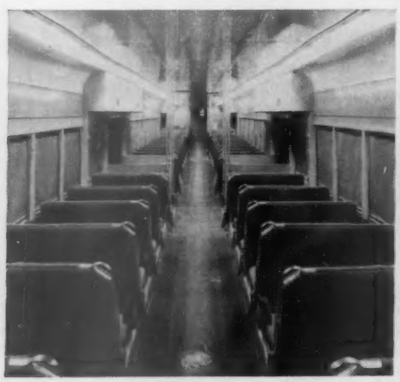
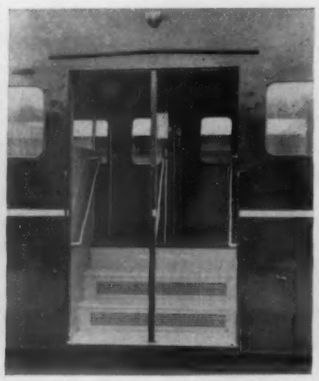


Constructed of light weight corten steel, the new cars have an exterior color scheme of Pullman green with a gold stripe trim. The interiors of the cars have varying paint treatments of gray, tan and blue, all of soft shades. All metal fittings are chromium plated. The Walkover form-fitting seats are of light brown fabric with plastic arm rests.

Safe and Easy Riding—the tightlock coupler holds the cars tightly together, reducing side sway and coupler slap to a minimum, thus assuring easier, smoother rides. Rubber buffers and draft gears, which eliminate draft gear slap, absorb the shocks of starting and stopping.







Fast, Easy Access and Exit—there are two sets of electro-pneumatic controlled sliding doors on each side of the car inside of the vestibule at the ends. The doors can be opened from any position in the train. Passengers can enter or leave the car four at a time. Hand rails and low tread, anti-slip metal steps allow easy access and exit from the cars. The lowered floor, which compensates for the lower tread, moves the center of gravity downward and contributes to easy riding qualities. **Full Vision** is provided by the row of fluorescent lighting over each seat and the large shatterproof, thermopane windows are tinted for heat and glare resistance. Thermostat controlled steam heat keeps the Fiberglas insulated cars warm in the winter. Air-conditioning of some of the cars and forced air ventilation of the others adds to summer comfort. Trains assigned to the longer suburban runs have wash rooms and toilet facilities.

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About two years ago, twenty new streamline suburban cars, similar to the one illustrated to the left, were put into service. The cars were designed to incorporate features which Rock Island executives believed were necessary to provide satisfactory service from both the commuters' and railroad's standpoints. These cars were constructed by Pullman-Standard to meet new safety, comfort and convenience requirements—to assure new operating economies. Today, both the commuters and the records attest to the success of these Rock Island cars.

PULLMAN-STANDARD helps provide

The Rock Island suburban cars are 85 feet in length with a seating capacity for 100 patrons. Each car is equipped with all-coil spring trucks with roller bearings, snubbers, and shock absorbing devices for easy riding. Smooth starting and stopping of the equipment is assured by tightlock couplers, high speed electric brakes, and the smooth action of the diesels, which provide the power. Twelve of the cars are air-conditioned, and the others have a system of forced, filtered air ventilation.

new highs in safety and comfort

All of these cars meet A.A.R., I.C.C. and R.P.O. requirements. They afford an excellent example of the ideal combination of maximum safety and comfort in commuter service. If you are interested in passenger cars—no matter how many—no matter what type—why not talk over your requirements with a Pullman-Standard representative? It will probably save you time and money to do so.

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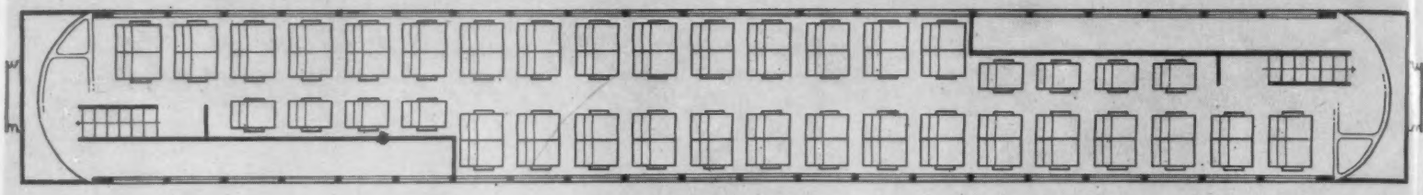
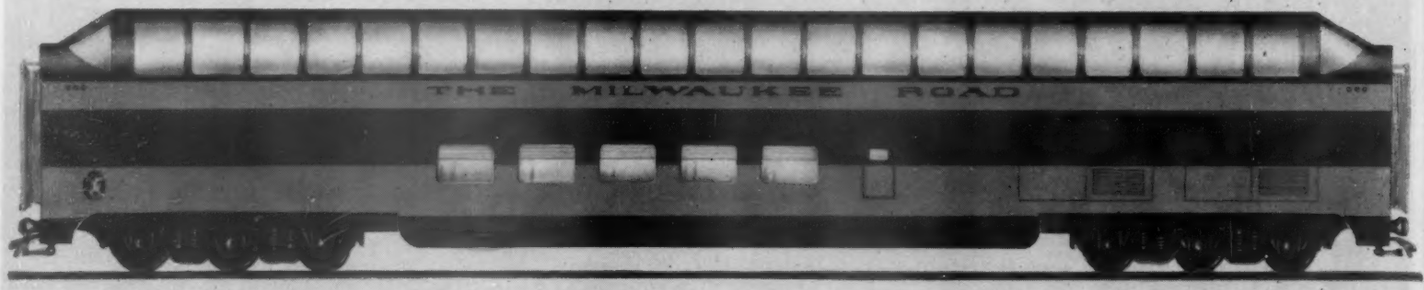
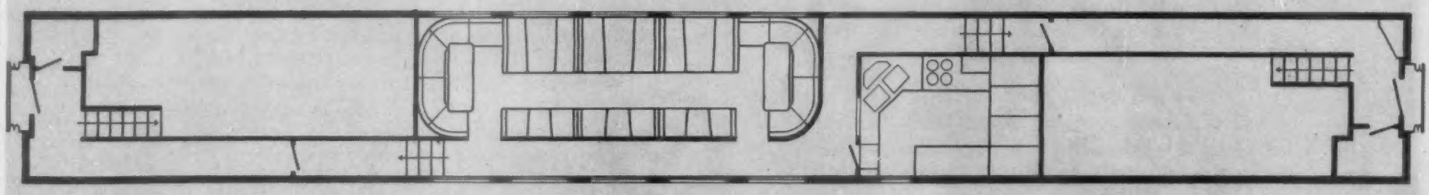


DOME LEVEL





LOWER LEVEL

Stairways lead to the dome from both ends of the car. Heat-resistant curved safety glass roof panels measure more than three feet wide and five feet high. Seats are non-revolving.

The lower level lounge features an illuminated full-color mural directly behind the large curved settee. The lounge section and the stairways are fully carpeted. Passageways allow passengers to pass through the car without disturbing those seated in the lounge. The color schemes, lighting, carpeting, upholstery and the conveniences of the full length dome cars were designed to please passengers and help make these cars real revenue-builders.

The air-conditioned observation-dome section of the full-length dome cars will seat 68 passengers in foam rubber cushioned seats. Beneath the dome is a dining and lounge section seating 28. Beverages and light snacks will be served from an all-electric stainless steel kitchen.

A portion of the lower level space over the trucks houses the air conditioning equipment, air compressors, fuel and water tanks. The housing is so designed that the equipment can be serviced regardless of weather conditions—whether the train is standing or moving. The cars have an over-all length of 85 feet.

SUBSIDIARY OF

CAR BUILDING DIVISION **PULLMAN**

79 EAST ADAMS STREET, CHICAGO 3, ILL. • BIRMINGHAM

For the Milwaukee Road—

An exciting, new concept of travel is to be presented to passengers by the Chicago, Milwaukee, St. Paul and Pacific. Widespread comment in the press and by the public has greeted the announcement of America's first full-length dome observation-lounge cars. Milwaukee President John P. Kiley sums up the advantages of the new cars by saying: "The cars will provide our patrons a new travel thrill. The full-length dome will permit a great number of passengers to view the scenic wonders of the area traversed with unobstructed vision".

PULLMAN-STANDARD is building

The ten full-length dome cars to be constructed by Pullman-Standard join a long line of "firsts". Pullman engineers have worked closely with railroad executives ever since the first "hotel" car was built by Pullman in 1867. Many of the comfort, convenience, safety and luxury features that distinguish modern American rail travel have resulted from this type of cooperative effort. The many years of design, engineering and construction experience, together with Pullman-Standard's unique production facilities, are assurance that the railroads can continue to look to Pullman-Standard for the development of their "firsts".

the first full-length dome cars

No matter how large or how small your passenger car problems are, the "Pullman" Standard may be the answer. Write us—let our engineers work out the solution with you. Whether you are interested in new and improved types of passenger accommodations, new heights in passenger comfort and enjoyment, new safety, convenience, economy or decorative features, we will be glad to discuss them with you.

When you come to Chicago, visit our Michigan Avenue Industrial Showroom.

PULLMAN INC.

PULLMAN-STANDARD CAR MANUFACTURING COMPANY

PITTSBURGH • NEW YORK • SAN FRANCISCO • WASHINGTON

EXPERIENCE IS THE BEST TEACHER

You're looking at an *extra* SKF Service regularly available to railroad maintenance men—*a clinic* at SKF's Philadelphia plant to teach these men the best, safest, most economical way to maintain anti-friction railroad bearings.*

This is another proof of the fact that SKF service doesn't stop when your bearings are delivered. It's one of the reasons why railroads depend on SKF for something *more* than just bearings—for the extra engineering help that stretches maintenance dollars to the limit.

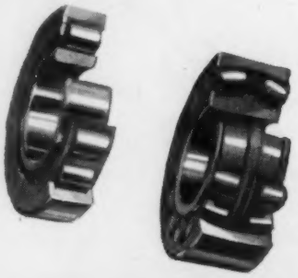
**Shown below are the railroads represented at the March 18-19, 1952 clinic*

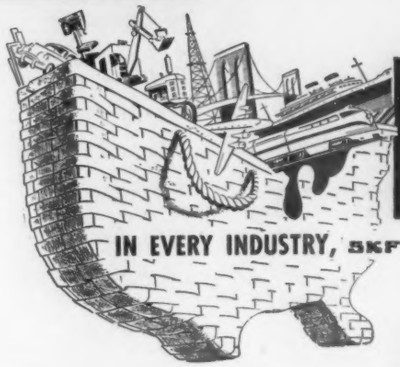
ERIE · Atlantic Coast Line · Lackawanna Railroad · New York, New Haven and Hartford · Western Maryland · Reading Lines · RR · B&O · SR

and SKF has the most of it

SKF installed the first railroad journal bearing in 1921. Since then, SKF journal bearings have been applied throughout the world to over 30,000 passenger cars, 52,800 freight cars, over 11,300 steam, diesel and electric locomotives. This reliance on SKF by an industry whose standards for reliability are so high is typical of SKF's acceptance by *all* industry.

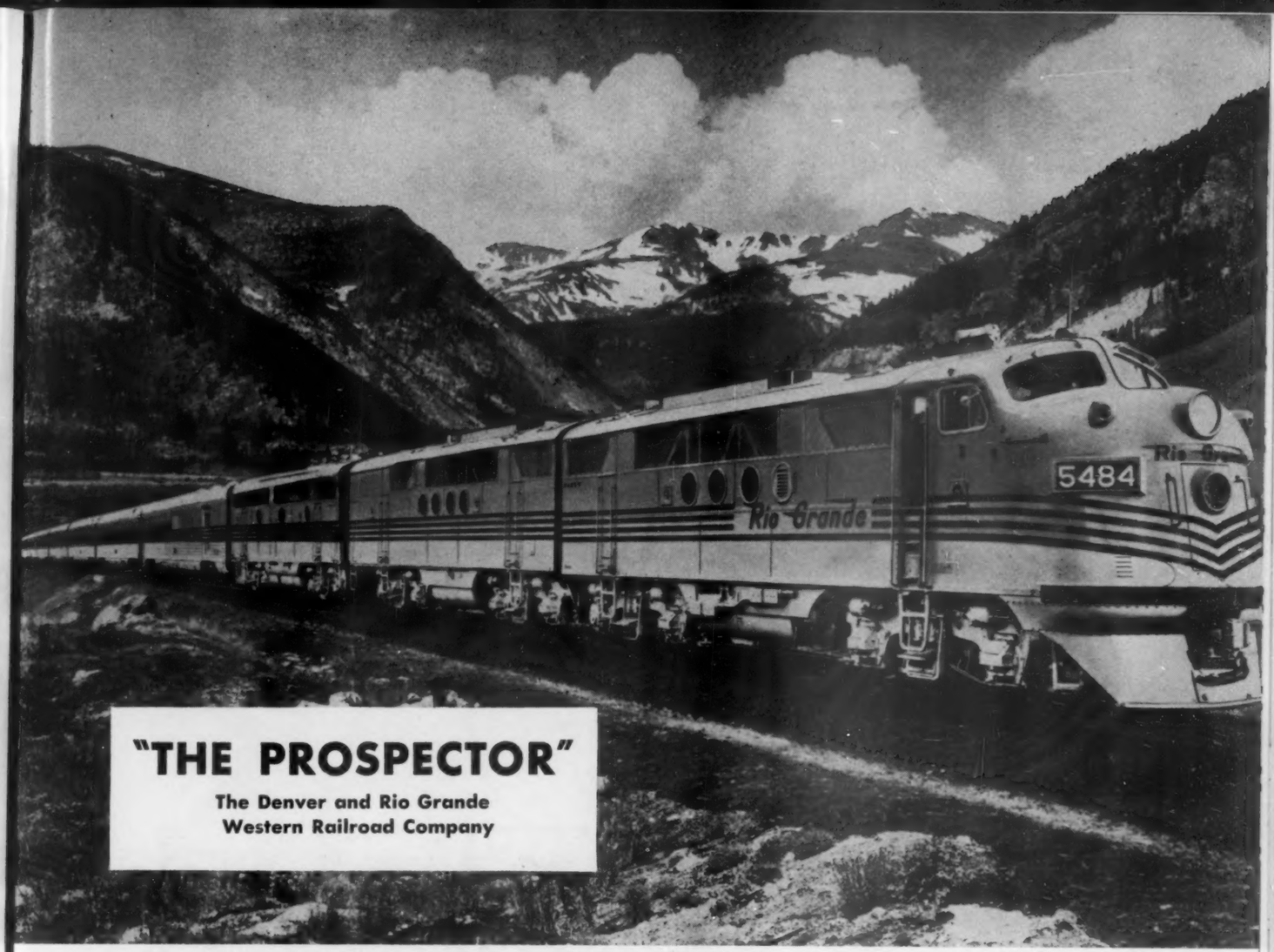
SKF INDUSTRIES, INC., PHILA. 32, PA.—*manufacturers of* **SKF** *and* HESS-BRIGHT *bearings.* 7355





SKF®
BALL AND ROLLER BEARINGS

IN EVERY INDUSTRY, SKF Puts The Right Bearing In The Right Place



Mastering mountains with Rio Grande's famous train, "THE PROSPECTOR"..

STANDARD HD
TRADE MARK
Oil

● Mastering mountains is all in a day's work for such Denver and Rio Grande trains as "THE PROSPECTOR." Traveling between Denver and Salt Lake City over the famed Moffat Tunnel Route, this streamliner takes long mountain grades in stride.

Like other main line passenger and freight trains on this progressive railroad, "THE PROSPECTOR" is powered by diesel locomotives. A contributor to the efficiency of these diesel locomotives has been STANDARD HD Oil. Clean, protective lubrication by this high quality, heavy-duty oil has helped keep maintenance costs down, availability high.

On more than 70 railroads, STANDARD HD Oil has proved its ability to provide safe, effective lubrication under the severest conditions of diesel operation. The benefits it offers are worth investigating. You'll find of real value, too, the services offered by a Standard Oil Railway Department representative. He has the training and practical experience to help you.

Standard Oil Company (Indiana), 910 South Michigan Avenue, Chicago 80, Illinois.

STANDARD OIL COMPANY STANDARD *(Indiana)*

It Pays to Remember...

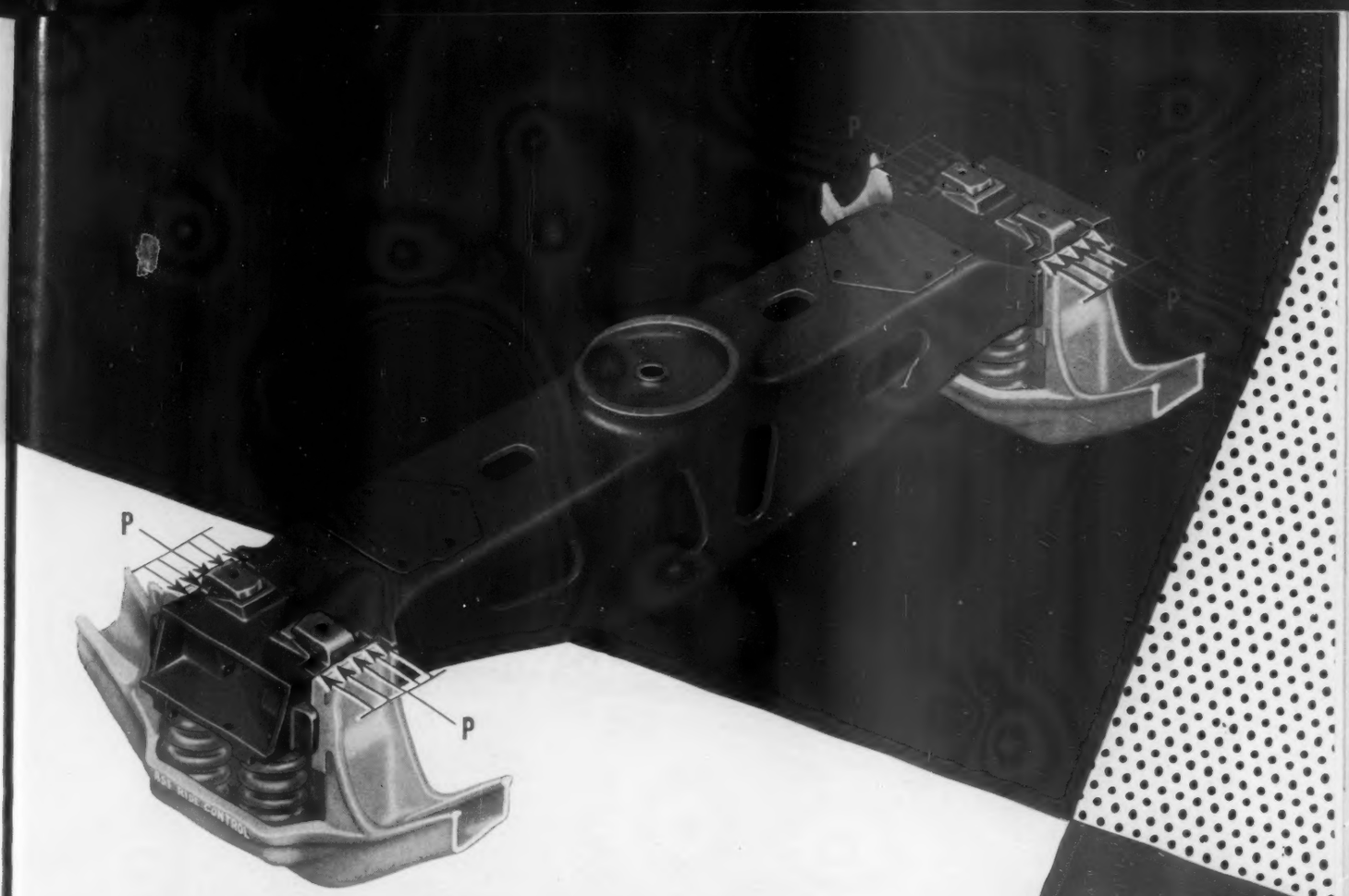
- **Model 10 Automatic Signals, replacing watchmen or manually operated gates, effect savings up to 100% of their original cost, during the first year of service.**
- **Model 10 Automatic Signals cost only a fraction as much as grade separation, yet they provide comparable protection. Unlike grade separation, Model 10's offer an *immediate* solution to the safety problem.**
- **Model 10 Automatic Signals expedite the fast flow of traffic on both rail and highway. In numerous cases, faster train speeds have been authorized at Model 10 protected crossings.**
- **Model 10 Automatic Signals guard busy crossings on nearly a hundred railroads. In the United States and in foreign countries, they're *first choice* of traffic experts seeking maximum protection at minimum cost.**
- **Model 10 Automatic Signals are *never off duty*. So reliable is their life saving performance, that NOT ONE accident has ever occurred as a result of operative failure on the part of these signals.**

Model 10 *design* has been imitated, but Model 10 *performance* never duplicated.

Model 10

AUTOMATIC GRADE CROSSING SIGNALS
PRODUCT OF
WESTERN RAILROAD SUPPLY COMPANY
CHICAGO 8, ILLINOIS

LEADING MANUFACTURER OF GRADE CROSSING SAFETY DEVICES — MAKER OF RAILWAY SIGNALING ACCESSORIES



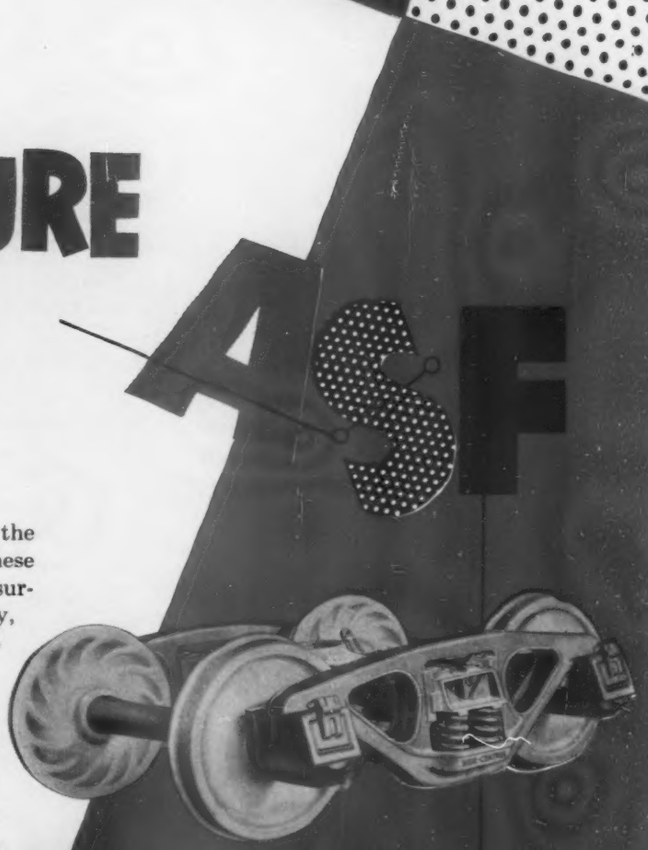
TWIN-PRESSURE PRINCIPLE

...it's so simple!

Two sets of identical twins! That's another way to describe the protective action of the four pressures "P" shown above. These pressures are exerted at the four sets of Ride-Control friction surfaces . . . and they're always equal and constant. Continually, these balanced pressures resist any movements which tend to force the bolster and side frames out of their normal alignment —thus *automatically squaring the truck.*

American Steel Foundries designed, developed, tested and introduced the Ride-Control Truck . . . for smooth-riding protection of lading and equipment at all speeds up to 100 miles per hour. At the same time, this better, more modern freight car truck assures you of lower maintenance costs.

For five years, now, there have been more Ride-Controls specified than all other trucks combined!



AMERICAN STEEL FOUNDRIES

410 N. Michigan Avenue, Chicago 11, Illinois

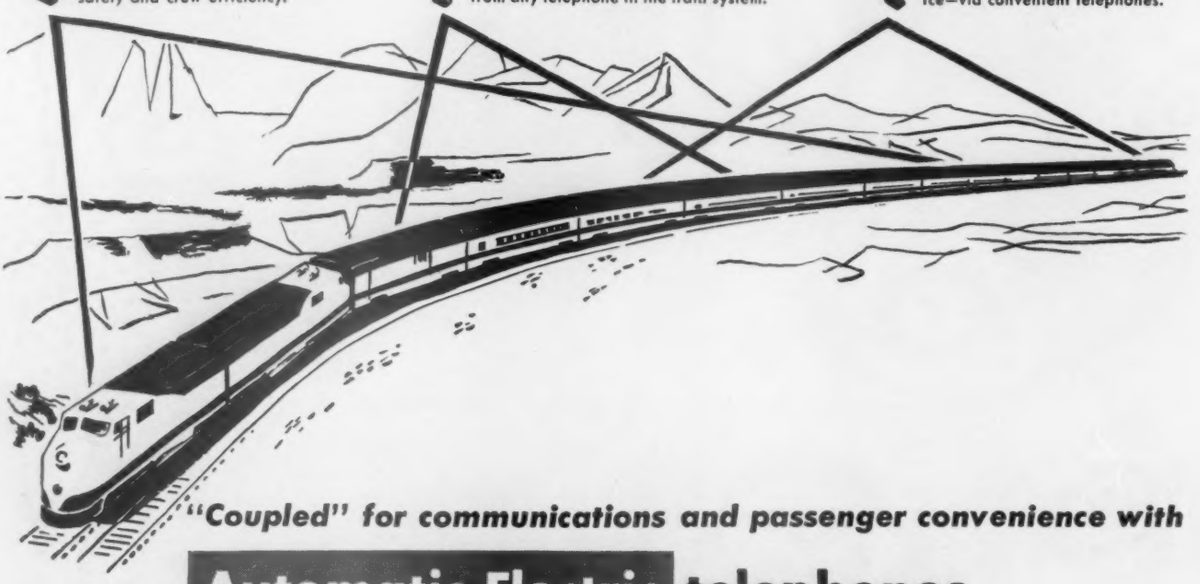
Mint Mark of ◯ *Fine Products*

Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

Engineer to Flagman
Telephone contact is important to safety and crew efficiency.

Conductor to Passengers
Public announcements may be made from any telephone in the train system.

Porter to Diner
Customer good will is won by service—via convenient telephones.



"Coupled" for communications and passenger convenience with

Automatic Electric telephones

Modern passenger conveniences attract passengers! Add Automatic Electric Intra-Train Telephones, and these services become *more* convenient—more quickly accessible to the traveling public. Quickly, at passengers' request, porters can arrange for accommodations, order refreshments, or call for any other service desired by patrons. Conductors or other crew members can dial into a public address system for "paging" or transmission of announcements over the entire train. And, of course, quick communication increases operating efficiency and passenger safety.

Automatic Electric telephones can be placed where most convenient in any car. Calling is a simple dial operation. System requires only a six-wire train line and stations may be connected together easily whether cars have 32-, 64-, or 110-volt d. c. power; the standard coupling receptacles are used.

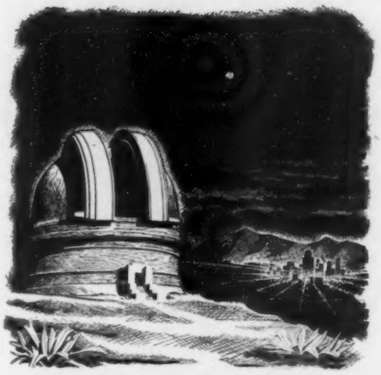
For greater passenger convenience, include intra-train telephones when planning new trains . . . or modernizing older trains. We will supply complete engineering details for an installation to meet your specific needs. Write: AUTOMATIC ELECTRIC SALES CORPORATION, 1033 West Van Buren Street, Chicago 7, Illinois. In Canada: Automatic Electric (Canada) Limited, Toronto. *Offices in principal cities.*

AUTOMATIC ELECTRIC

Makers of Telephone, Signaling and Communication Apparatus...Electrical Engineers, Designers and Consultants

Distributors in U.S. and Possessions:
Automatic Electric Sales Corporation...1033 West Van Buren Street, Chicago 7, U. S. A.
In Canada: Automatic Electric (Canada) Limited...284 King Street West, Toronto, Ontario

How Honeywell Controls help man chart the universe from a mountaintop in Southern California!



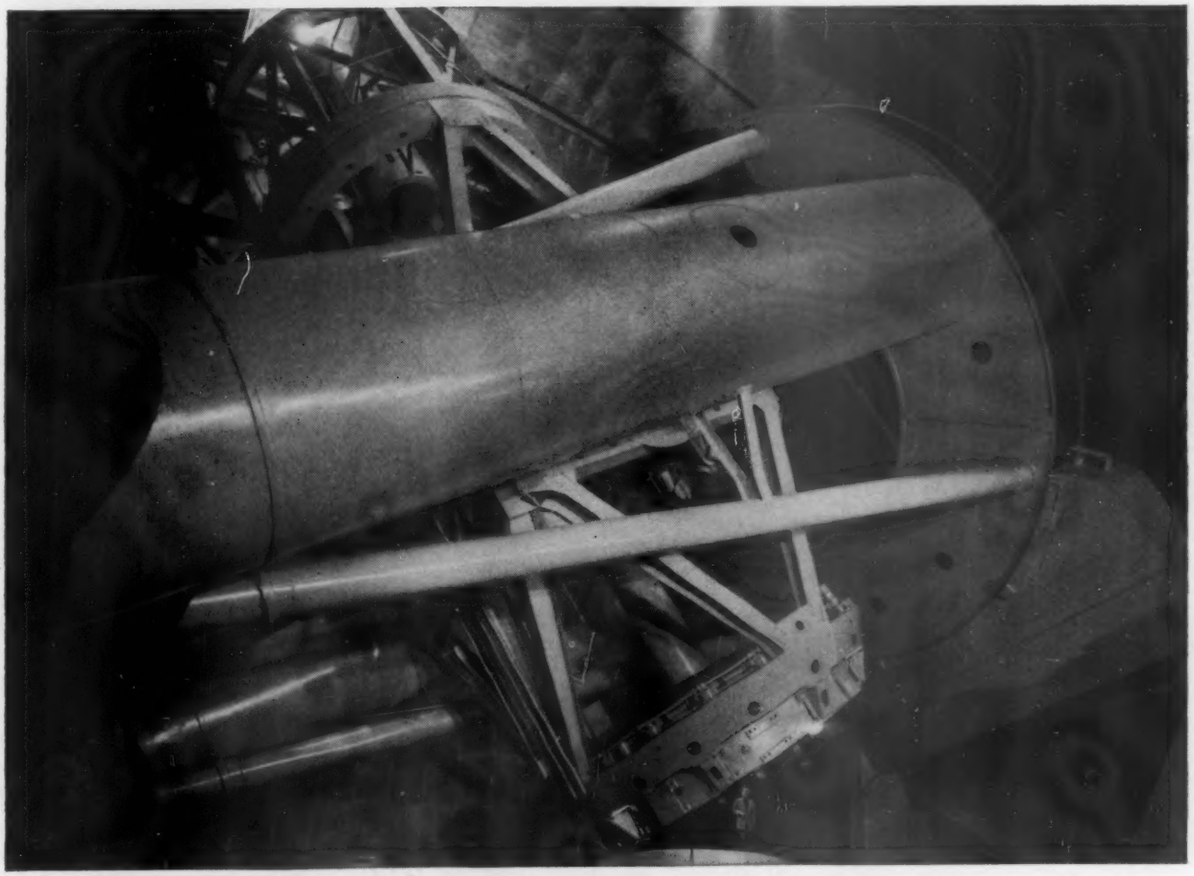
IN THEIR INITIAL work with the Hale telescope pictured below, astronomers have been able to see more than *six thousand billion billion* miles out in space!

Despite its great size and 500-ton weight, the 200-inch Hale telescope at the summit of Palomar Mountain in California is one of the finest precision mechanisms ever built.

For example, a film of oil supports the immense weight of the instrument as it moves with the smooth accuracy which holds a star image motionless on the photographic plate. Variation in the thickness of that film by as little as plus or minus *one ten-thousandth* of an inch from a critical value is instantly detected by Micro Switch units. These Honeywell products were chosen by the scientists because of their reliability and long life.

This is just one way Honeywell "know-how" in the field of automatic control is helping America live better, work better. At Honeywell one out of ten employees is engaged in research and engineering—working to find new and better applications of basic temperature control principles for transportation and other industries.

This is the age of Automatic Control. And Honeywell has been the *leader* in controls for more than 60 years.

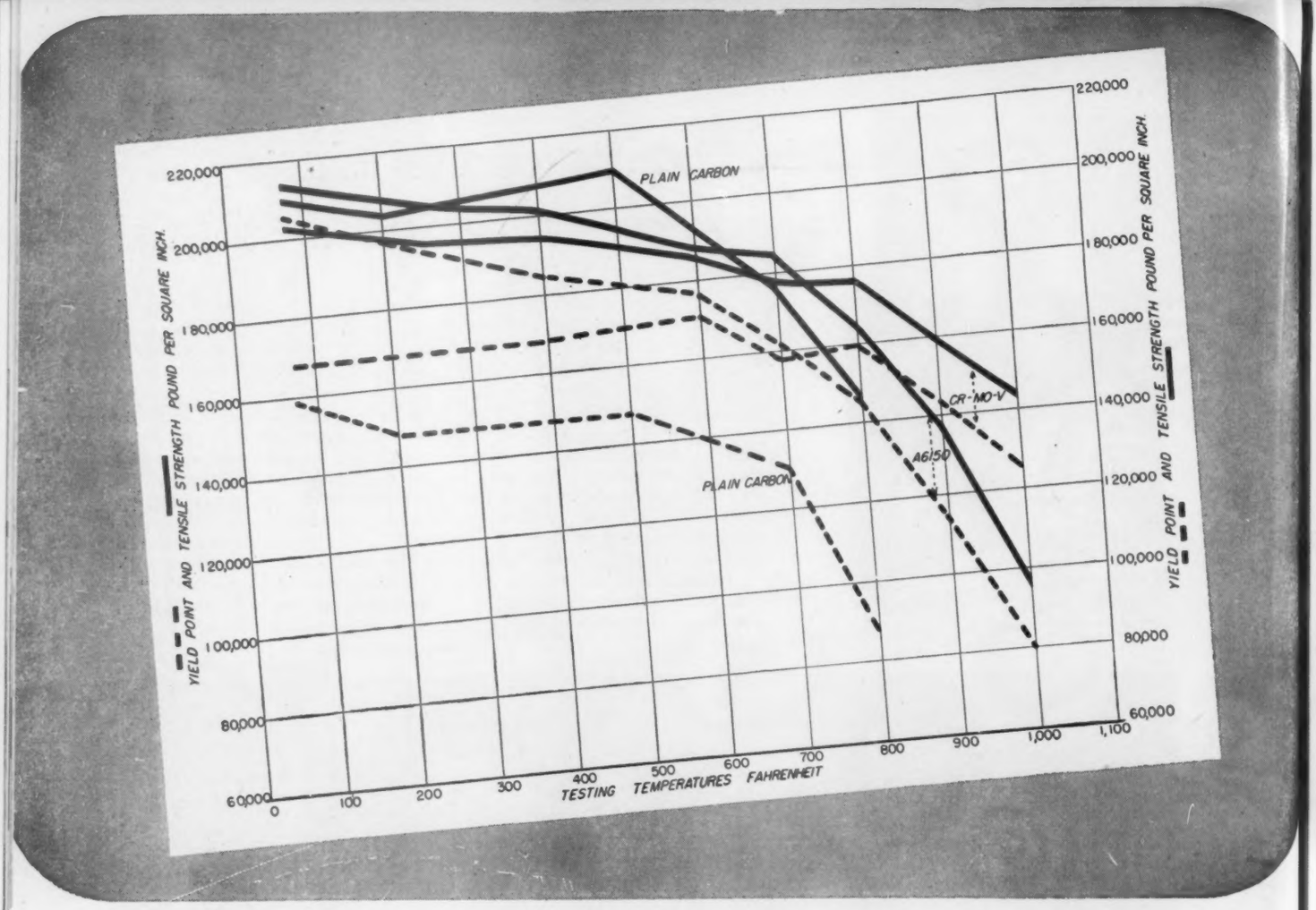


America lives better—works better—with Honeywell Controls

MINNEAPOLIS **Honeywell**

First in Controls

We are reprinting this advertisement, which recently appeared in national magazines, to give you an idea of the scope of Honeywell activities in the field of Automatic Controls. We believe our experience in the entire control field enables us to provide better controls for your trains and buildings—to better serve the Railroad Industry.



HIGH TEMPERATURE PROPERTIES

of Cr-V and Cr-Mo-V Spring Steels

SPRINGS FOR SERVICE at elevated temperatures require steels which resist softening and lowering of the yield point. Unless hardness and yield strength are stabilized by correct alloy additions to the steel, these properties deteriorate rapidly as the temperature is raised.

The chart above shows the yield point and tensile strength of three types of spring steel at elevated temperatures determined by standard short-time tension tests.

Springs of plain carbon steel are sometimes used at moderately elevated temperatures, although their lower yield values prevent them from giving service as satisfactory as that of the alloy spring steels.

Chromium-vanadium steel springs, such as AISI 6150, give better service at ordinary temperatures because of the higher yield point. In addition, they may be used at operating temperatures up to about 700° or 750° F because they retain high yield point values as the temperature is increased.

Chromium-molybdenum-vanadium steel was especially designed for springs operating at temperatures in excess of 750° F. It can be used for springs operating at temperatures as high as 850° F or even higher under some conditions. At 800° F, the yield point of this steel is still greater than that of plain carbon steel at room temperature.

If you have a problem in spring applications at elevated temperatures, our metallurgical engineers will be glad to help you solve it.

MAKERS OF ALLOYS — VANCORAM BRAND — CHEMICALS AND METALS

VANADIUM CORPORATION OF AMERICA

420 LEXINGTON AVENUE, NEW YORK 17, N. Y. • DETROIT • CHICAGO • CLEVELAND •

Another *SHERWIN-WILLIAMS* "FIRST"...

HOT SPRAY FINISHING FOR FREIGHT CARS

TWO-coat protection in ONE application . . . out-of-service time for refinishing freight cars cut nearly in HALF . . . a higher-gloss, more durable finish obtained more *uniformly,* even under many adverse weather or temperature conditions!

These and other benefits are now offered railroads and car builders by Sherwin-Williams Hot Spray Synthetic Freight Car Enamel—another product of Sherwin-Williams leadership in the development of protective coatings for the Railway Industry. Utilized widely in finishing of quality furniture, and in other fields, the Hot Spray process, with its many advantages, is introduced now after four years of successful field testing for railway service.

Hot Spray applies twice as much finish coat material in a single operation . . . does away with drying time between finish coats . . . nearly doubles shop capacity . . . relieves traffic department bottlenecks. Ask for full details. Write The Sherwin-Williams Co., Transportation Dept., Cleveland 1, Ohio.

One of 250 Rock Island steel freight cars finished with Sherwin-Williams Hot Spray Synthetic Freight Car Enamel in operational test at The Pullman-Standard Car Mfg. Co., Michigan City, Ind., in 1951. These and previous tests indicate a definite increased life expectancy for the finish.

SHERWIN-WILLIAMS
RAILWAY FINISHES

Rear cars of modern Streamliners may be nearly a *thousand feet* from the locomotive, but you never hear a passenger ask for accommodations "up front" near the heat-source. Why? Because efficient Wovenstone pipe insulation assures hot steam throughout the train—in any climate, in coldest weather—for comfort that builds higher revenues. All modern trains need *today's* better Wovenstone . . . the insulation that defies service hazards. We'll gladly send new Wovenstone literature. Ask for Folder 76-136.

UNARCO

UNION ASBESTOS & RUBBER COMPANY

332 SOUTH MICHIGAN AVENUE • CHICAGO 4, ILLINOIS

INTERNATIONAL DARLING...

American-made Simtex napery is the unanimous choice of the restaurants at Rockefeller Center. The perfect companion to any menu, Simtex napery is held in highest esteem for its dependable service, its ever gleaming freshness, which is due to the exclusive patented Basco finish.

Simtex

SIMTEX MILLS, 40 WORTH STREET, NEW YORK 13, N. Y.
Division of Simmons Company, Makers of the famous Beautyrest Mattress

SIMTEX COVERS MORE TABLES THAN ANY OTHER MAKER IN AMERICA.

RUST-OLEUM Protects Metal...

Saves Even Badly Rusted Surfaces!

The Practical Way To Cut Maintenance Costs — Add Extra Life To Rolling Stock, Bridges, Towers, Tanks, Metal Equipment!

Here's how easy it is to stop rust with RUST-OLEUM! Simply apply RUST-OLEUM by brush, dip, or spray directly over rusted surfaces . . . after removing rust scale and loose particles by wirebrush and sharp scrapers. Costly sandblasting and chemical pre-cleaning are not usually required. Dries to a firm, elastic, durable coating. See how RUST-OLEUM can cut your maintenance costs. Specify RUST-OLEUM for all new construction, maintenance, repair or rebuilding.

New RUST-OLEUM Railroad Catalog
Send for your free copy of this new catalog today—for the facts on how RUST-OLEUM can cut your maintenance costs.

In All Colors, Aluminum and White

RUST-OLEUM CORPORATION
2594 Oakton Street, Evanston, Illinois

RUST-OLEUM STOPS RUST!

Stopping Rust with RUST-OLEUM 769 D.P. Red Primer

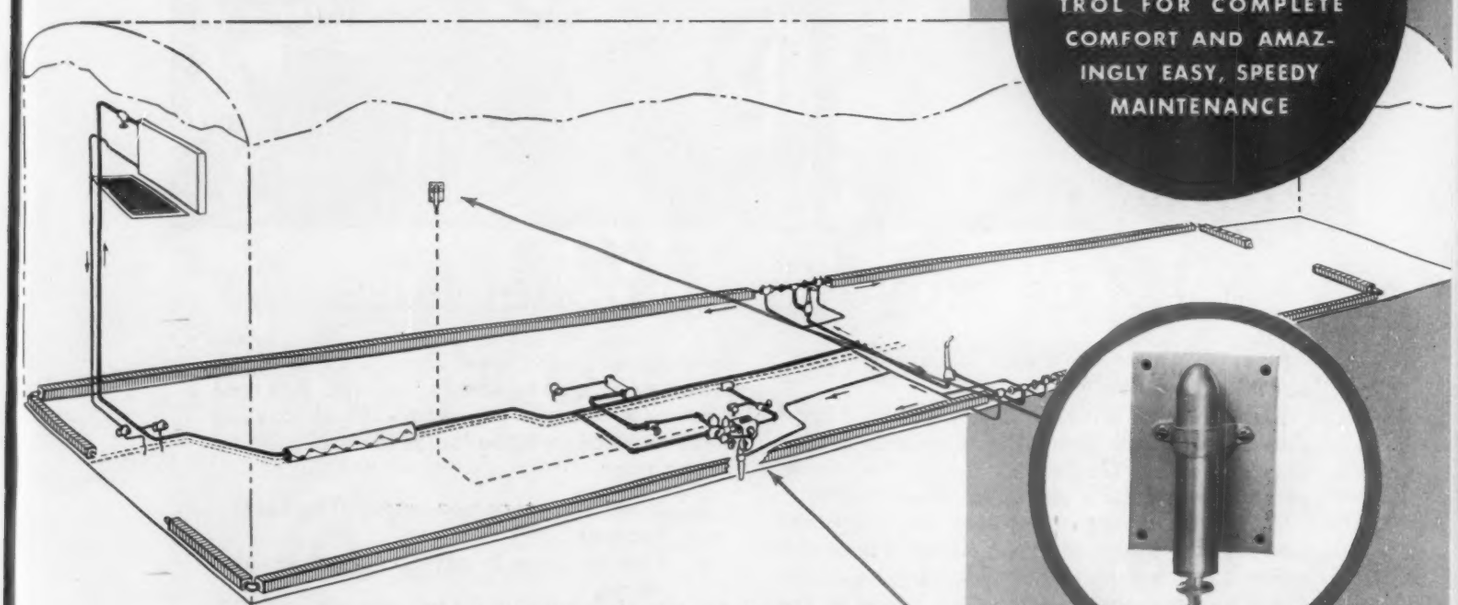
HERE'S THE MOST IMPORTANT CAR HEATING ANNOUNCEMENT IN THE HISTORY OF RAILROADING...

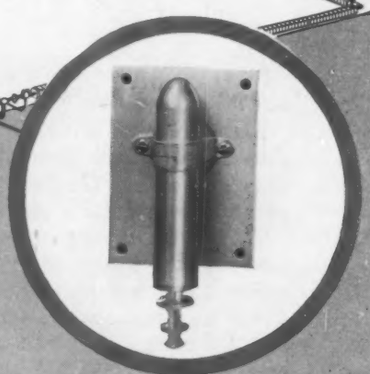
VAPOR Unizone

THE ULTIMATE IN OPEN BODY CAR HEATING

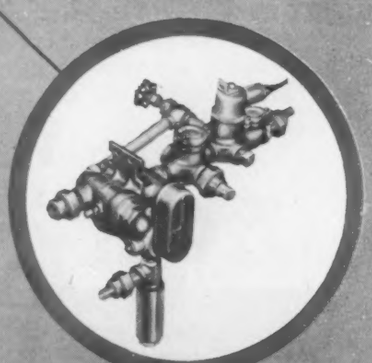
Only 2

SIMPLE PARTS PROVIDE INSTANT, ACCURATE CONTROL FOR COMPLETE COMFORT AND AMAZINGLY EASY, SPEEDY MAINTENANCE





1. Vapor Rador Cycling Thermostat



2. Vapor Unizone Regulator

- SIMPLEST
- MOST COMPACT
- LIGHTEST WEIGHT
- MOST EASILY MAINTAINED
- MOST FLEXIBLE
- MOST ACCURATE
- MOST COMFORTABLE

For the first time in Railroad Heating history—the full advantages of a liquid heating system *plus* the full advantages of a steam heating system with only two simple parts already known and understood by operating and maintenance forces.

Thoroughly engineered to eliminate need for pumps, heat exchange liquids or their accompanying complications.

No "time out" whatsoever for shopping or maintenance. Complete unit can be removed and replaced by a serviced and tested unit in minutes at regular shopping or maintenance cycles similar to air brake triple valve maintenance.

For full and specific details about the application of Unizone to your open body cars, write for Bulletin 567.

VAPOR HEATING CORPORATION 80 EAST JACKSON BLVD. · CHICAGO 4, ILL.

NEW YORK · ST. PAUL · DENVER · ST. LOUIS · PORTLAND · WASHINGTON · PHILADELPHIA
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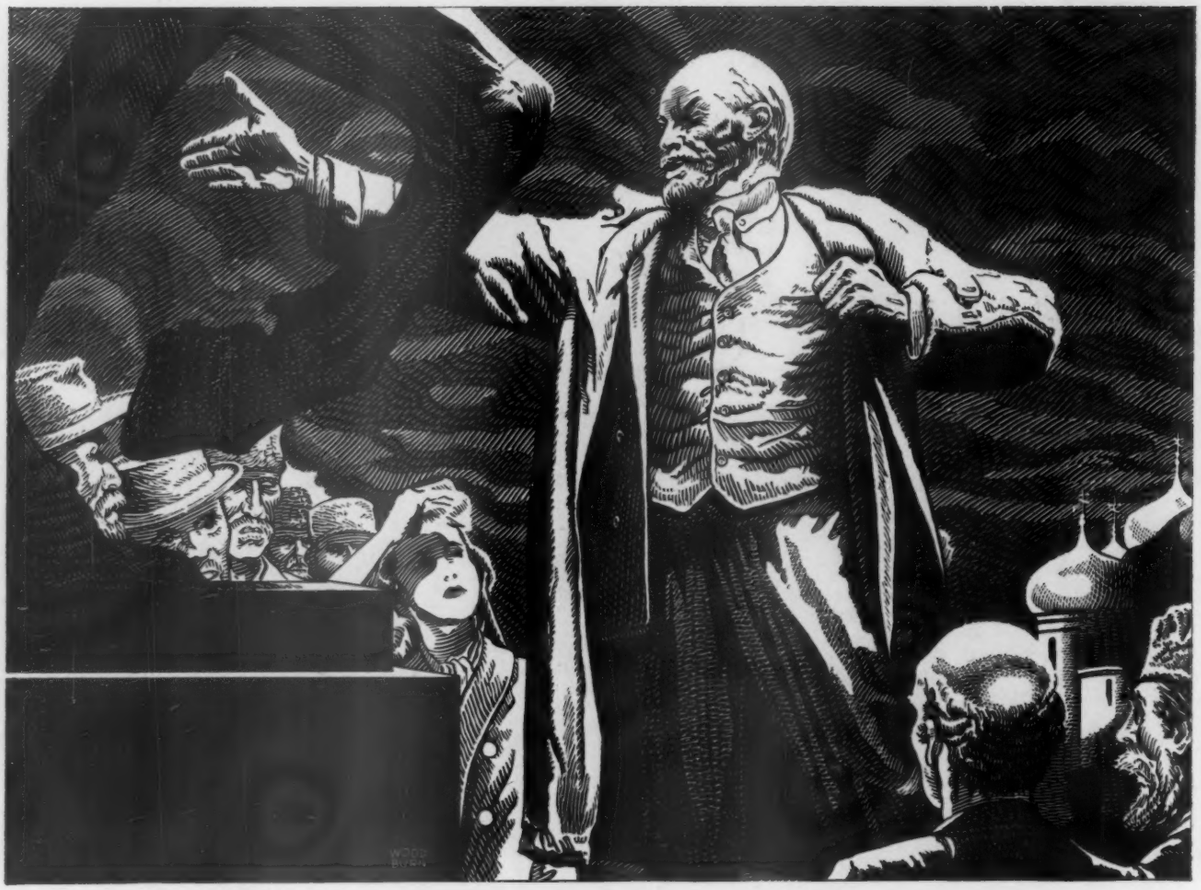


Let us prove this prophet false

"We shall force the United States to spend itself into destruction."

These are the words of Lenin, father of Russian Communism. Quoted from page 191, volume xxi, of his Collected Works, they were printed recently in a metropolitan newspaper.

This is the announced goal of the Politburo, and it is the direction in which many patriotic citizens fear we are headed. For example, Congress has just appropriated $87 billion to be spent during 1952, and enacted taxes estimated to produce only $71 billion. The deficit is to be added to our national debt, already $259 billion; and this deficit will depreciate the national currency by another $16 billion.

Part of this stupendous appropriation is to rearm ourselves and the free world against Communist attack. But what about the rest of our spending?... Let us also be realistic. It is time for us as a nation to pause, reflect and consider well. We can do three things to avoid national bankruptcy:

1. Eliminate every non-essential federal expense.
2. Provide taxes to pay all obligations as we go.
3. Pay off some of our national debt every year.

Let every citizen who believes in preserving our nation from the economic termites within, as well as from the announced enemy without, become an active worker to prove the Russian prophet false.

YOUR SCRAP IS NEEDED — YOUNGSTOWN

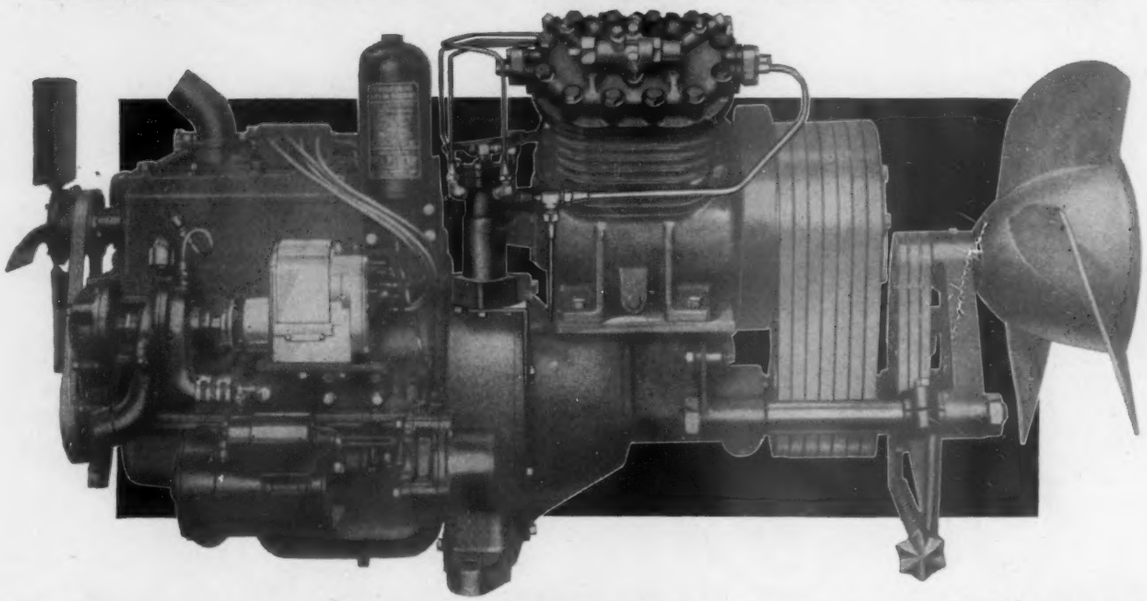
The Youngstown Sheet and Tube Company

General Offices--Youngstown 1, Ohio
Export Offices--500 Fifth Avenue, New York

MANUFACTURERS OF CARBON ALLOY AND YOLOY STEELS

The steel industry is using all its resources to produce more steel, but it needs your help and needs it now. Turn in your scrap, through your regular sources, at the earliest possible moment.

Now WAUKESHA adds ANOTHER BIG FEATURE



CAPACITY STEP CONTROL

on RAILWAY ICE ENGINES

Now even those railway car passengers who are particularly sensitive to slight temperature and humidity changes may ride in complete air conditioned comfort. A new feature—Waukesha capacity step control—gives the Waukesha Railway Ice Engine closer comfort control.

This is an added refinement. The basic features of the Waukesha Railway Ice Engine—proved by seventeen years of outstanding service, and millions of miles of operation on modern streamliner passenger cars of more than 40 major railroads—remain unchanged. Capacity step control . . . now standard on all current models . . . only makes the Waukesha Railway Ice Engine even more dependable in meeting the most exacting requirements of modern railway air conditioning.

Waukesha Railway Ice Engines already in service may be converted to utilize fully the advantages of the Capacity Step Control—Waukesha Conversion Kits make it a simple and inexpensive operation.

Write for Bulletin 1598.

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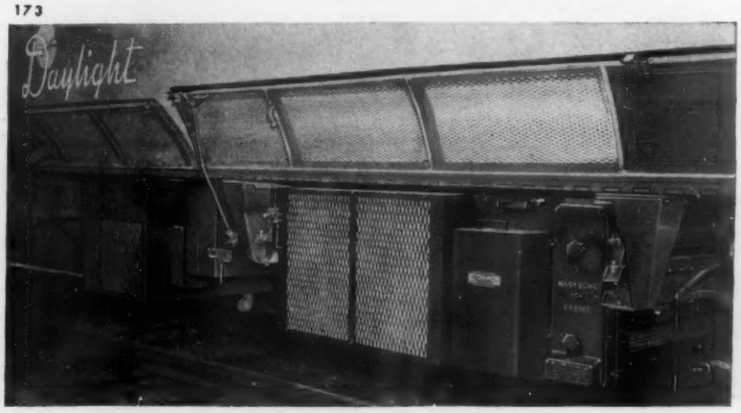


Under car installation of Waukesha Ice Engine and Sub-Cooler.

RAILWAY DIVISION

WAUKESHA MOTOR COMPANY

WAUKESHA, WISCONSIN

Largest Builders of mobile, engine-driven Refrigeration and Generator Equipment

Reduce Maintenance Costs with ....AMCRECO

Let Amcreco Creosoted Products help you cut maintenance costs . . . they can do it.

This is no idle claim! The records of several of the nation's leading railways prove that cross ties, bridge ties, framed bridge timbers, piles, poles and cross arms treated with the Lowry Process of pressure creosoting *last longer* . . . in fact, they even exceed normal life expectancy. This process protects timber so that maintenance is cut to the minimum. Year after year you realize the resultant profits.

Amcreco
Lowry Process
Creosoted Products

Have an Amcreco Representative give you details. There is no obligation.

Pressure treated for strength that lasts

AMERICAN CREOSOTING COMPANY
INCORPORATED

COLONIAL CREOSOTING COMPANY INCORPORATED

AMCREO LOWRY PROCESS CREOSOTED

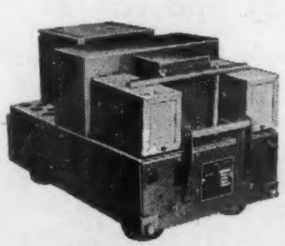
GEORGIA CREOSOTING COMPANY INCORPORATED

GENERAL SALES OFFICE — CHICAGO, ILLINOIS

MISSOURI PACIFIC orders

MORE C-D VIBRATOR CONVERTERS

Satisfied with the dependable performance of its original C-D Vibrator Converter installations, the Missouri Pacific Lines recently placed a sizable order for additional units.



Only the Cornell-Dubilier Vibrator Converter has the patented dual vibrator circuit with automatic switch-over. Assures uninterrupted radio communications. Self-servicing en route. Cuts cost of initial installation by 60%; cuts maintenance costs each year by 50%. *Write today for catalog: Cornell-Dubilier Electric Corporation, Dept. RA52B, Indianapolis Division, 2900 Columbia Ave., Indianapolis, Ind.*

Affiliate Member A.A.R.

CONSISTENTLY DEPENDABLE
CORNELL-DUBILIER
VIBRATOR CONVERTERS *with Railroad Dependability*

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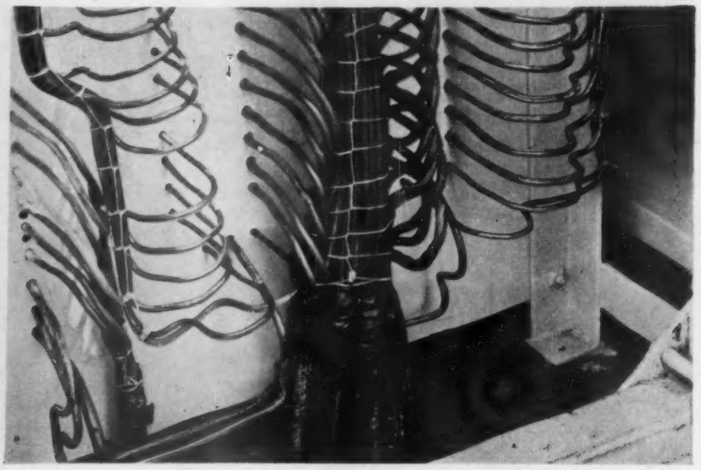


RAILWAY AGE
EDITORIAL COMMENT

A PROGRAM FOR PROFITABLE PASSENGER BUSINESS

Any business which grosses $1.4 billion in a year, as the railroads' passenger train operations did in 1951, is fundamentally a good business—especially when it is in considerable measure a "by-product" of such a large business as the railroads' freight traffic. In spite of all the blues which have been sung about the passenger business from the days of James J. Hill down to the present—it still presents a volume of dollar patronage already in existence which would bring joy to the hearts of many enterprising promoters of new ventures. The problem is primarily one of translating gross revenue into net revenue—and the keystone to that situation is the easing of regulatory handicaps, which, in turn, hinges on attracting the public's attention to where its own self-interest lies.

It is a fact—and a fairly easy one to explain, too—that requiring the railroads to operate trains which are hopelessly "in the red," because people won't ride them, simply denies the railroads the funds with which to provide adequately modern service in many places where sufficient potential patronage exists to make good train service remunerative. The public, quite likely, isn't going to become sufficiently interested unless its pocketbook nerve gets a pretty firm twist—which probably means a concrete promise, railroad by railroad and division by division somewhat as follows: "Get us permission to take off trains A and B which nobody rides and we will purchase x new cars to improve service on trains C and D which people show an inclination to patronize."

Getting rid of hopelessly profitless trains is the key to the whole situation. For example, one of the railroads with passenger service in the most favorable brackets, according to the "I.C.C. formula," attributes its success, very largely, to the fact that it has been successful in discontinuing all but a couple of its "red ink" trains; and to the fact that mail service is more nearly remunerative now than it used to be. Getting rid of all, or nearly all, the "red ink" trains could accomplish as much for many if not most railroads.

Key to the Public's Concern

Just bellyaching about the injustice of the present regulatory limitations will not usually accomplish very much. Most people have too many troubles of their own to worry about to give them much concern about the injustices done to the railroads—unless the railroads can show people how their own burdens are, in reality, holding back a quality of service that the public really wants. What is needed is a persuasive *quid pro quo*—something to identify what the railroads want with what the public wants.

A comprehensive and specific policy toward passenger traffic, widely publicized by management, ought to develop this awareness of mutual interest. Some details of such a comprehensive policy might be the following:

1. A statement that the discontinuance of Trains A, B, et al. will save the railroad x dollars annually which, if realized, will be spent to re-equip trains C, D, et al.—a promise calculated to enlist the support of the much larger number of people who patronize the latter group of trains.

2. Persistent effort to put commutation traffic, where it exists, on at least a "break even" basis—by constant

factual education of patrons, looking to tax relief, adequate fares, and mitigation of onerous working rules.

3. Continuing educational effort with all employees who deal with the traveling public (e.g., the Louisville & Nashville's course for passenger conductors as described in our March 31 issue, page 45).

4. Improving the information and the zeal of ticket sellers—possibly by incentive payments as discussed hereinafter, and certainly by providing more educational literature for them.

5. Simplification of tickets, both local and interline, by methods already successfully pioneered.

6. Intensified attention to dining car service—alike from the standpoint of reducing costs and of providing more satisfactory meals.

7. Reviving the credit card and making its acceptance general and uniform without a lot of red tape. (Since the hotel chains, the air lines, the telegraph company, the phone company, the gasoline service stations, and the drive-yourself auto renters make this plan work to their profit, it takes a lot of explaining to prove that the railroads can't possibly do it.)

8. Getting detailed market surveys on all passenger operations, with the objective of scheduling and pricing to secure the "optimum" traffic and revenue.

9. Much closer liaison with reliable auto renters, hotels, local bus lines, travel agencies, and other businesses which can greatly enhance the convenience and usefulness of existing railroad service, and the public's knowledge thereof. There's no really good reason, either, why the railroads, air lines and bus lines shouldn't cooperate more than they do, to improve service for patrons who want to travel partly by one agency and partly by another. Lack of such cooperation forces many people to use their own cars when their patronage might be secured for public transportation services.

10. A determined attack by the railroads, possibly in cooperation with the car builders, on the problem presented by the present fantastic variety in passenger car equipment, in the cost of maintenance as well as original cost.

11. Unremitting study of head-end traffic, to assure its profitable movement wherever possible.

The foregoing list is meant to be suggestive rather than complete. But can it be doubted that any railroad or group of railroads which would publicly and vigorously pursue a program embracing a half-dozen or more of such objectives would greatly add to its ammunition in combating costly regulatory restraints and be fairly on its way toward putting its passenger operations safely "in the black?"

There is nothing novel or revolutionary about any of these suggestions. All of them have been tried more or less widely, usually with success in proportion to the degree of vigor with which they have been pursued. There isn't any one "solution" to a problem with as many facets as "the passenger problem"—there have to be as many answers as there are varieties of questions. But the central and controlling aspect is, undeniably, that of anachronistic regulation.

No Monopoly Now

It was morally as well as legally right—at a time when there were no good highways and when the train was the only vehicle capable of moving faster than six miles or so per hour—that a railroad having an exclusive franchise over a certain route should be required to provide for *all* the traffic on that route, the lean along with the fat. The closest approach that now exists to a monopoly in passenger transportation is enjoyed by the private automobile, a vehicle happily untouched and untouchable by the regulators. With this competitor paralleling the railroads everywhere—and the public bus almost everywhere; and with the airplane available on longer hauls, it is unrealistic to the point of imbecility for the railroads to be held to their old "monopoly" obligations. Continuance of these obligations requires the railroads to provide costly service where it is not wanted, thus denying them the means with which to provide really superior service which would serve actual patrons.

Surely, with the facts being what they are, the fatal incubus of regulation can be shaken off. But it won't be shaken off unless the public can be aroused to the advantages of genuine competition in the passenger business—and the first step in that direction is for the railroads to bestir themselves to act competitively, as far as the law allows; and to kick loudly and continually against all restraints which prevent their doing a bigger and more profitable business. It is a fight in the public's interest, as well as in that of the railroads.

Moreover, in the words of Harry De Butts, president of the Southern (*Railway Age*, December 31, 1951, page 45), "there is no way you can lose or pick up freight customers so fast as by the quality of passenger service you provide." That being true, and since few roads can retire from passenger traffic altogether, even if they want to, why not go out to make it as popular and as profitable as possible? The means to that end are more and more discernible all the time—and the determination to use these means is visibly increasing. A man who can be really pessimistic about $1.4 billion of business already in hand, and with plenty of chances for expansion, is a pessimist indeed!

INCENTIVE FOR INSIDERS, TOO

There is much controversial talk these days about whether the railroads should pay commissions to outside travel agents on all types of travel—not just on all-expense travel, as is now the case. But while the railroads

and the travel agents are arguing about incentives for *outsiders*, perhaps consideration ought to be given to reward for *insiders*—the railroaders who sell tickets.

One of the chief reasons advanced for the reluctance of the railroads to pay commissions to outside agencies on ordinary tickets is that they already maintain expensive station and city ticket offices and see no reason to pay money to others to duplicate points of contact with the public—especially since, even for agency-sold business, railroad forces would still have to service the sale (make reservations, prepare tickets, etc.). Why then, should not every effort be made to insure that the railroads' own forces are encouraged to sell to the hilt?

Several years ago, L. J. Joswick of the Chicago & North Western told the American Association of Railroad Ticket Agents he thought existing seniority processes and union regulations had taken the incentive out of selling by railroad ticket agents. "Many of our sales people have often fallen into following the lines of least resistance, putting in their time each day doing what they are asked to do in a more or less perfunctory way, not giving too much thought to doing a good selling job or trying to hold business to the rails." Mr. Joswick hastened to point out that, in spite of the *system*, there are nevertheless "many agents and ticket salesmen and solicitors who are conscientious and display as much interest and initiative in their jobs as though the business belonged to them and its success depended upon their individual efforts."

Not Ordinary Practice

But no business can get along if it depends upon the accident of individual good will, or moral drive, to generate sales. The system itself must provide the incentive for men to perform at their best. It used to be that promotion was the reward for outstanding performance. Where this type of reward is no longer feasible, some other form of incentive must, somehow, be provided.

For the most part, jobs and pay in the railroad business are based upon relative job responsibility, technical qualification and length of service. To graft upon this body an incentive scheme, in which the earnings of men *in* the same job—though not *doing* the same job—may differ, is a task with many pitfalls and requiring abrupt departures from customary practice.

For example: As is quickly discovered by any firm setting up a commission basis of sales, one of the knottiest problems that an administrator can face is that of establishing a system which will take account fairly of the contrasting potentials of various sales "beats." The same problem comes up whenever consideration is given to a bonus system for ticket agents. How can the wide range of business potentials among the various offices—and within the same office—be equalized?

These and many other obstacles make the job of providing incentives for railroad passenger sales a challenging problem. But the prize would appear to make the effort worthwhile.

A QUESTIONABLE DECISION

A recent decision of the General Committee of the Mechanical Division of the Association of American Railroads has become a subject of wide discussion. The decision denied the application for the introduction of 5,000 freight cars of the Unicel construction in interchange. The prototype of this design has been through the first two stages of the process of winning its way to acceptance as a carrier of freight on American railways. It has survived the impact, squeeze, wedge and compression tests to determine the adequacy of its structural strength. Then it was placed in service between Chicago and the Pacific coast on the line of the Chicago, Milwaukee, St. Paul & Pacific. It has completed a total of 220 days on main-line carriers, during which it ran up 32,646 miles. The record in both these stages is understood to be favorable; that is, the car performed satisfactorily, at least to the extent that nothing in the record suggested any reason why it would not be safe to put the design into limited interchange service.

Railway Age is expressing no opinion as to the ultimate success of the Unicel type of construction, either structurally or economically. Indeed, it would seem that neither should the decision of the General Committee have been influenced by the opinions of the members of that committee on these points. The real question would seem to be whether or not the design has adequately demonstrated its safety as an item of railway rolling stock, so far as possible within the scope of the experience permitted to date. If the General Committee elects to determine the future of such mechanical developments on any other basis, what chance has any of them of getting a start on the railways?

A decision favorable to the introduction of a limited number of cars of the new design in interchange would not, of itself, place that number of cars in service. It would give the proponent of the new design a hunting license to go out and bag orders for cars good in interchange from individual railroads up to the limit set—if enough railroads could be found which thought the new design worth a trial. The possibility of selling house-type cars restricted to service on the home line scarcely offers a commercial basis of procedure.

How have new rolling-stock designs or new devices of any sort used by railroads been introduced except as individual railroads have been found whose officers believed in their possibilities? What ultimately determines the value of the Unicel car or of any other new development except the combined experience of the railroads which believe it worth a trial? Action based on unfavorable prejudgment by a central body, the members of which are without experience with the new design, practically closes the door to the acquiring of experience by anybody.

There is a principle involved here which is far more important than the adoption or rejection of this particular car.

TRAINS THAT PAY

Passenger business is good business on many railroads. It is traffic which is being actively sought and developed. On the following five pages are ten good reasons why the railroads are vitally interested in the passenger and his welfare. Here are presented capsule data about ten representative passenger trains—each on a different railroad—which are "profitable," i.e. their revenues exceed their out-of-pocket expenses. *This list is far from being all-inclusive, or even representative, because there are of course many profitable passenger trains which it was not possible to list here.* Also, space permits including only one train from each railroad, though most here represented had other runs equally noteworthy.

Contrary to what may be said by some politicians, chambers of commerce and people who have more enthusiasm about railroads than knowledge of their income accounts, there is no "miracle cure" which can make the passenger business profitable as a whole. The past two decades of railroad history are strewn with the wrecks of noble experiments in equipment and service.

But this portfolio of ten samples—of widely varying kinds of trains in different territories—does demonstrate that, provided a railroad is situated so as to enjoy good traffic potential, then the right equipment, service, schedules and fares—and aggressive selling—can be put to work to engineer trains that at least pay for their keep; probably put something into the till which would be lost without them; and win friends for the railroad—not only in a business way but in the court of public opinion where the ills of subsidy and regulation will eventually be fought.

The road to success—as measured on a strictly cash basis—appears to lie in the careful control of costs, and in the planning and operation of a service which will attract adequate patronage. Fares are important too, but experience has demonstrated that low fares by and of themselves are not an infallible "answer."

The success of the individual trains shown here is a testimonial to adaptability. Each of these trains is designed to produce a service tailored to the needs of a certain market. They all have good schedules—meaning that they are scheduled to run at the hours of the day when popular demand for service is greatest—and comfortable equipment. Some of the trains are "streamliners"; others are not, by any strict definition.

Long Distance Services

The railroads have practically moved out of the local passenger business wherever they have been allowed to do so, except in commuting zones around large metropolitan centers. They are devoting increasing attention to designing attractive services for the traveler going from 100 to 1,000 or more miles. These are trips where travel by train can offer many advantages in the way of comfort, speed, reliability and low cost, as compared with travel by automobile.

The cost and revenue figures used here are exactly as supplied by the interested railroads. Inasmuch as individual roads have slightly different methods of computing costs and revenues, these figures are not necessarily strictly comparable.

BALTIMORE & OHIO — Capitol Limited

(2 units)

Operation: Daily overnight between New York-Washington and Chicago, 991 miles.

Revenue per train-mile: $6.51.

Out-of-pocket expenses per train-mile: $3.35 (including dining-buffet net loss).

Normal consist: 1 club car, 10 sleepers, 2 diners, 1 Strata-dome sleeper, 1 observation car.

Unusual features: Strata-dome sleeping car. Two diners, separated in the train so that passengers do not have to walk considerable distances to obtain meals. Train secretary.

WABASH — Blue Bird

(1 unit)

Operation: Daily round trip between St. Louis and Chicago, 286 miles each way.

Revenue per train-mile: $3.41.

Out-of-pocket expenses per train-mile: $2.59.

Normal consist: Coffee shop-club car, 3 dome coaches, dining car, 1 dome parlor-observation car.

Unusual features: This train has proved so popular that it has been necessary to order an additional dome-parlor car for the train. The new car is expected during the coming summer.

WESTERN PACIFIC — California Zephyr

(6 units in joint operation with D. & R.G.W. and C.B. & Q.)

Operation: Daily round trip between Oakland and Salt Lake City (en route between Oakland and Chicago), 924 miles each way.

Revenue per train-mile: $4.35 (W.P. operation only).

Out-of-pocket expenses per train-mile: $3.16 (W.P. operation only).

Normal consist: Baggage car, 3 Vista-dome coaches, Vista-dome buffet-club car, dining car, 4 sleeping cars, Vista-dome club-observation car.

Unusual features: Daylight trip through the scenic Feather River Canyon, uniformed Zephryette hostesses, radio or wire-recorded music in each sleeping room, dining car reservation plan. Traffic on this train has proved so heavy that an extra sleeping car has been ordered, with delivery expected this summer.

DENVER & RIO GRANDE WESTERN — California Zephyr

(6 units in joint operation with W.P. and C.B. & Q.)

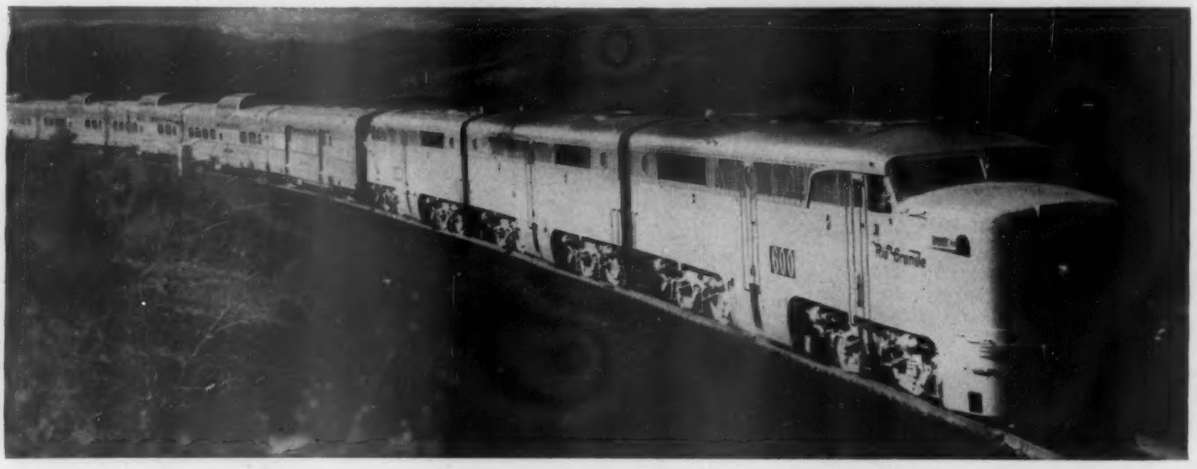
Operation: Daily round trip between Salt Lake City and Denver (en route between Oakland and Chicago), 570 miles each way.

Revenue per train-mile: $4.86 (estimated) (D. & R.G.W. operation only).

Out-of-pocket expenses per train-mile: $4.00 (estimated) (D. & R.G.W. operation only).

Normal consist: Baggage car, 3 Vista-dome coaches, Vista-dome buffet-club car, dining car, 4 sleeping cars, Vista-dome club-observation car.

Unusual features: Daylight trip through the Colorado Rockies, dining car reservation plan, radio or wire-recorded music in each sleeping room, uniformed Zephyrette hostesses. Travel on this train has increased to the point where an additional streamlined sleeping car has been ordered, with delivery expected this summer.



SOUTHERN PACIFIC — Lark

(2 units)

Operation: Daily round trip between San Francisco and Los Angeles via the Coast Line, 470 miles each way.

Revenue per train-mile: $7.26.

Out-of-pocket expenses per train-mile: $5.87.

Normal consist: Baggage-express car, railway-post office car, 11 sleeping cars, buffet-lounge sleeping car, three unit diner-lounge (comprising, diner, lounge and dormitory).

Unusual features: Train telephone service between San Francisco and Salinas, and between Ventura and Los Angeles. Three unit diner-lounge, including the "Lark Club" lounge unit. An all-sleeping car train; no coach passengers handled.

MILWAUKEE — Afternoon Hiawatha

(2 units)

Operation: Daily round trip between Minneapolis and Chicago, 421 miles each way.

Revenue per train-mile: $7.49 (excluding dining and buffet services).

Out-of-pocket expenses per train-mile: $3.74 (excluding dining and buffet services).

Normal consist: Mail and express car, 5 to 7 reclining-seat lounge coaches, Tip Top grill car, dining car, drawing room parlor car, parlor-Skytop lounge observation car.

Unusual features: Skytop-lounge observation car. An exclusive all-dome lounge car will replace the present Tip Top grill car next fall.

CENTRAL OF GEORGIA — Nancy Hanks II

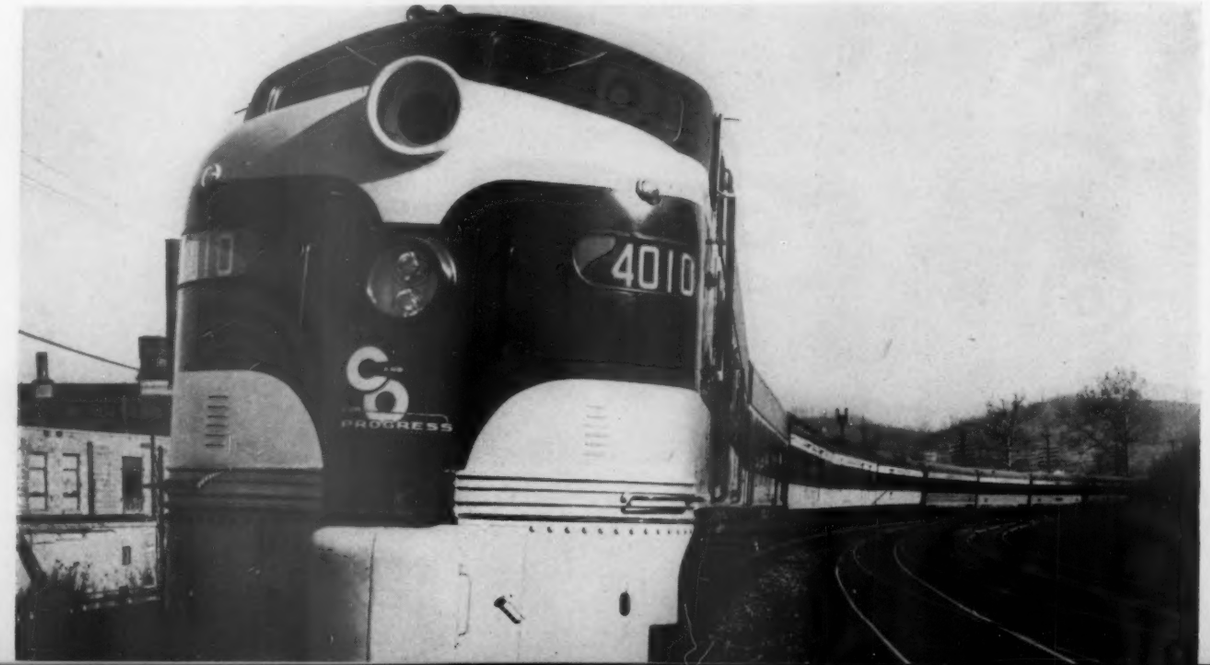
(1 unit)

Operation: Daily round trip between Atlanta and Savannah, 294 miles each way.
Revenue per train-mile: $2.45.
Out-of-pocket expenses per train-mile: $1.91.
Normal consist: Four coaches and a grill-lounge car.
Unusual features: Grill-lounge car. This train has a drawing power within a radius of 50 miles of the rail heads, and is extensively used by regular travelers in the rural areas going to Macon and Atlanta. The "lowest round trip fares in the country" (1.32 cents per mile on 5-day limit tickets) are in effect on this line.

CHESAPEAKE & OHIO — The George Washington

(2 units)

Operation: Daily overnight between Washington-Newport News and Cincinnati, 666 miles each way.
Revenue per train-mile: $6.71.
Out-of-pocket expenses per train-mile: $4.56.
Normal consist: Baggage and mail cars, 3 reclining seat coaches, dining car, 7 sleeping cars.
Unusual features: Every sleeping car is an all-room car. De luxe reclining seat coaches; each seat with its own reading light and ash tray.



FRISCO — Kansas City-Florida Special

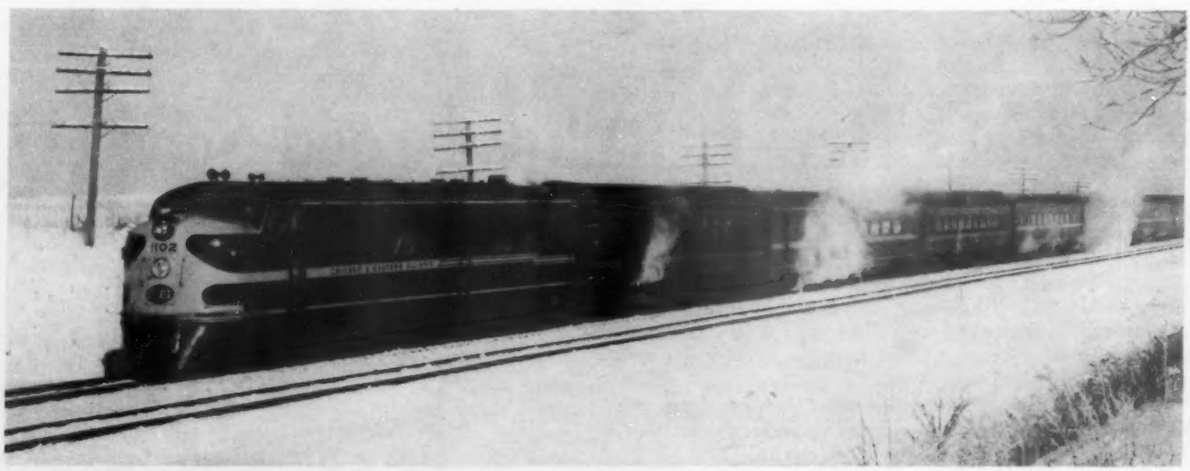
(3 units)

Operation: Daily between Kansas City and Birmingham (en route to Jacksonville), 737 miles each way.
Revenue per train-mile: $4.90 (Frisco operation only).
Out-of-pocket expenses per train-mile: $3.30 (Frisco operation only).
Normal consist: Three sleeping cars, two reclining-seat chair cars, diner-lounge, dormitory-coach, and baggage-mail cars.

CHICAGO & EASTERN ILLINOIS — Humming Bird

(3 units)

Operation: Daily between Chicago and Evansville (en route to New Orleans), 287 miles each way.
Revenue per train-mile: $5.87 (C. & E.I. operation only).
Out-of-pocket expenses per train-mile: $3.69 (C. & E.I. operation only).
Normal consist: Baggage car, mail car, express car, 4 reclining seat coaches, club-lounge car, 2 sleeping cars, and a parlor-lounge observation car.
Unusual features: This train is less than a year old—insofar as its operation into and out of Chicago as a separate train is concerned—and has been successful from the start.



Good dining car meals start in the commissary where the very best in the way of fruits, meats and vegetables are purchased and stored until needed. Railroad commissary agents are widely known in the food industry for consistent insistence upon quality.

Precooked, quick-frozen meals make possible many dining car economies—attractive meals at low prices.

The Chesapeake & Ohio is making successful use of its low-price, single-tray "Chessie Tray" service.

What's New in Railroad Food Services?

The railroad dining car and restaurant field has been bustling with activity in the past few months as a growing number of railroads set forth on campaigns to improve food service, reduce dining car meal prices, and cut overall dining car losses. The approaches to these common problems vary widely, both by individual companies and by regions.

The most novel recent development has been the introduction of precooked, quick frozen foods on both the Chesapeake & Ohio and the Rock Island. The C. & O. is purchasing commercially prepared precooked frozen foods and serving them in their own stylized "Chessie Tray Service" at remarkably low prices for a complete meal.

The Rock Island is precooking and freezing its own foods at its Chicago commissary, and is serving regular menu meals in the conventional dining car manner, but at sharply reduced prices. The advantages claimed for precooked, quick-frozen meals are economy in handling—both in the commissary and on the car—

Large central kitchens are used to prepare meats, pastries, breads and other foods for dining cars to save time in the crowded car kitchen, to assure uniform quality, and to simplify control.

Automatic vending machines have been introduced on trains by the Rock Island and the Pennsylvania.

The Rock Island is precooking and freezing its own foods in its re-equipped Chicago kitchens.

simplified accounting, reduction in loss due to waste, spoilage, and unauthorized employee meals. In actual service, they have proved popular with passengers on these roads.

Plastics have invaded the dining car in the form of a new material which has the weight and feel of china, but which is virtually unbreakable. It is just being introduced on the Chicago & North Western.

Paper cups, napkins, and place mats are being introduced on some grill and coffee-shop cars as a means of reducing costs, thereby making possible lower meal prices.

Automatic vending machines which are intended to withstand the rigors of railroad operation are now in use on the Rock Island and Pennsylvania. The machines, which are vermin proof and mechanically operated—and therefore independent of the car's electrical system—are being successfully used on both long-distance and suburban trains. Machines are being used to dispense coffee, doughnuts, and sandwiches.

Advance preparation of foods is being practiced more widely as individual dining car departments explore every opportunity for reducing costs—thereby making possible lower menu prices—without sacrificing the quality or quantity of food served. Skilled cooks and dietitians are being brought into the central kitchens where foods are prepared for consumption on the dining cars. This is being done to insure appetizing, balanced meals.

A number of railroads in all parts of the country are featuring economy meals on certain trains. These meals—which achieve their low price by virtue of limited menu selection and carefully controlled commissary and kitchen practices—are designed to be appetizing and filling, and yet appeal to the limited budget of the vacation traveler.

A buffet-parlor car on the Canadian Pacific. Four of these cars have recently been completed at the road's Angus shops at Montreal for day train service.

How Short Is the Passenger-Car Supply?

Adequate to date, how will it stand up should complete mobilization become necessary? A high percentage of coaches over age

Since 1944, the peak year of railroad passenger traffic during World War II, the number of passenger coaches has declined by about 2,200 and the number of passenger-coach combinations by nearly 600. This is a loss of approximately 192,000 seats. There are more than 1,800 fewer sleeping and parlor cars than in 1944, and the difference represents a loss of accommodations for about 50,000 persons. During the six years 1945 to 1950, inclusive, retirements averaged over 2,300 passenger-train cars of all classes annually, and installations, 1,880. The heavy decline was in passenger-carrying cars and there was an increase of about 500 non-passenger-carrying cars.

The reason for the heavy retirements of passenger-carrying cars during this period is not hard to seek. As of January 1, 1951, over 42 per cent of the passenger coaches and coach combinations were 30 years old or older and nearly 80 per cent were 21 years or older. The situation was somewhat better with respect to parlor and sleeping cars. Not quite 25 per cent of these cars were 30 years or more old and slightly less than two thirds of them were 21 years old or older. Improvement in the quality of parlor and sleeping-car facilities is reflected in the fact that 27 per cent of these cars are not over ten years old. This also applies to dining cars. The acquisition of parlor cars, sleeping cars and dining cars has been relatively high during recent years, while that of coaches has been relatively low. Only 11 per cent of the coaches and coach combinations are 10 years or less of age.

The reductions in the passenger-carrying capacity of the available supply of passenger cars has not so far proved a matter for serious concern. In 1941, before the participation of the United States in World War II got under way, the railways handled a passenger traffic of 29.36 billion passenger-miles. This rapidly increased to a peak of 95.58 billion during 1944. Traffic then declined rapidly to 31.77 billion passenger-miles in 1950. During 1942, the first year of our participation in the war, the traffic jumped to 53.68 billion passenger-miles, an increase of 83 per cent in one year. During 1951 the increase from the low of the preceding year was to 34.62 billion passenger-miles—only 9 per cent.

Effect of Korean Situation

There are several reasons why the increase of passenger volume has not been large since the beginning of Korean hostilities. In the first place, the mobilization of military forces has been limited as compared to the war mobilization beginning in 1942. Furthermore, military training has required much less moving around of trainees than was the practice during World War II. Again, the rate of industrial mobilization has been too leisurely to cause anything like the peak of business travel which developed during 1942, 1943 and 1944.

The maximum congestion in railroad travel occurred during 1943, 1944, and 1945. During those years the average occupancy of coach seats was about 51, 53 and 50 per cent, respectively. During 1950 this percentage fell to a little less than 30, and the traffic increase of 1951 raised it to 32. This is a long way from the 53 per cent which was the average during 1944.

The average occupancy of sleeping and parlor cars

Despite the new coaches built recently for "name" trains, only 11 per cent of all coaches and coach combinations are 10 years old or under.

PASSENGER-TRAIN CARS ORDERED, 1934-1951

	Carbuilders' Shops			Railroad Shops		
	Passenger Carrying	Non-Passenger Carrying	For Pullman Co.	Passenger Carrying	Non-Passenger Carrying	Total
1951	248*	13	0	0	0	261
1950	53	5	0	0	44	102
1949	95	12	0	2	0	109
1948	444	62	0	0	0	506
1947	128	11	0	138	39	316
1946	1,114	62	0	56	6	1,238
1945	2,690*	213	0	90	0	2,993
1944	683*	32	0	10	0	725
1943	1,670*	0	0	0	15	1,685
1942	32*	2	0	0	0	34
1941	206*	115	197	31	0	549
1940	335	15	53	0	6	379
1939	175	21	125	0	0	321
1938	79	33	84	63	19	278
1937	181	145	171	39	31	567
1936	367	33	1	38	12	451
1935	48	69	10	6	0	133
1934	307	20	8	71	23	429

*Includes troop hospital, sleeping and kitchen cars.
Source: American Railway Car Institute.

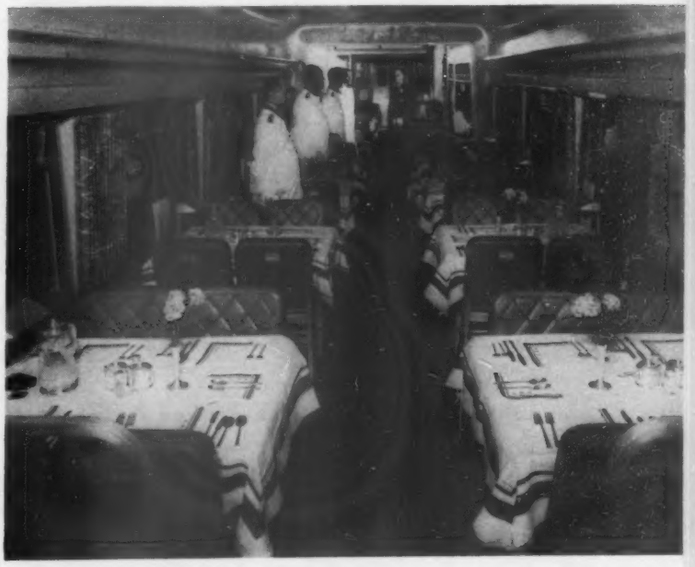
PASSENGER-TRAIN CARS DELIVERED, 1934-1951

Year	Contract Shops	Company Shops	Export	Total
1951	144	34	132	310
1950	954	10	0	964
1949	915	18	80	1,013
1948	767	124	55	946
1947	670	191	26	887
1946	1,329*	8	35	1,372
1945	928*	3	0	931
1944	995*	8	0	998
1943	681*	4	21	706
1942	387*	31	11	429
1941	349*	0	14	363
1940	251	6	28	285
1939	276	0	0	276
1938	352	82	0	434
1937	557	72	0	629
1936	151	40	0	191
1935	200	5	0	205
1934	180	95	15	290

* Includes troop cars.
Source: American Railway Car Institute.

during the war years was much higher than that of coaches. During 1944 it reached about 77 per cent. During 1951 it averaged about 53 per cent. For one who was compelled to travel during the war years, particularly on the heavily traveled through routes, any percentage of

About 27 per cent of the sleeping and parlor cars now in service are not over 10 years old.



In the improved dining-car fleet, 27 per cent of existing cars have been built within the past 10 years.

Name trains on main routes are long and passenger space is at a premium. ("The New Royal Palm").

Coach trains are well filled on the main routes. (The "Pacemaker" on the New York Central.)

PASSENGER-TRAIN CARS ON ORDER FOR DOMESTIC SERVICE, MAY 1, 1952

Purchaser	No.	Type	Builder
Boston & Maine	1	Rail Diesel Car	Budd
Chicago & Eastern Illinois	4	Sleeping	Pullman-Standard
Chicago & North Western	6	Coach	Amer. Car & Fdy.
	2	Baggage-Express	Amer. Car & Fdy.
Chicago, Burlington & Quincy	14	Coach	Budd
	2	Coach-Combination	Budd
	21	Sleeping	Budd
	3	Dining	Budd
	1	Postal	Budd
	3	Parlor	Budd
Chicago, Milwaukee, St. Paul & Pacific	10	Coach-Combination	Pullman-Standard
Grand Trunk Western	5	Coach	Pullman-Standard
	4	Baggage-Express	Amer. Car & Fdy.
Long Island	20	Multiple-Unit	Pullman-Standard
Louisville & Nashville	22	Sleeping	Pullman-Standard
Missouri Pacific	4	Coach	Pullman-Standard
Nashville, Chattanooga & St. Louis	3	Sleeping	Pullman-Standard
Texas & Pacific	1	Coach	Pullman-Standard
Transportation Corps	152	Various	St. Louis Car
	3	Various	Amer. Car & Fdy.
Union Pacific	8	Coach	Amer. Car & Fdy.
	8	Baggage-Express	Amer. Car & Fdy.
	16	Sleeping	Amer. Car & Fdy.
	8	Dining	Amer. Car & Fdy.
	2	Postal	Amer. Car & Fdy.
Wabash	1	Parlor	Pullman-Standard

Source: American Railway Car Institute

occupancy less than 100 of either sleeping cars or coaches seems very unreal. On these routes, every passenger space was occupied and there were not enough to go around. However, many thousands of car-miles were operated on lines not on the main routes affected by war movements; there travel was light. These brought the average down. It is improbable that, should such an emergency occur again, any more complete average utilization of the capacity of passenger-carrying cars could be achieved than was done in 1944.

What if such an emergency should occur within the near future? Fortunately, the prospect seems remote at the present time. But in a world situation as unsettled as that which prevails currently, and which, by all the signs, will prevail indefinitely, it is by no means academic to give consideration to that question.

While the traffic pattern in another all-out war undoubtedly will not parallel that of World War II, the passenger movement of those years is a starting point for consideration of the possibilities. If it were necessary to duplicate the type of mobilization of 1942 to 1945, there would probably be some increase in civilian traffic over that of the peak war year (1944) because of the growth of population and the greater spread of industry. This assumes the probability that in the emergency the railroads would be expected to handle some of the passenger-miles which now move on the highways and in the air. This might involve a total traffic approaching 98 billion passenger-miles a year.

Car-miles per passenger-carrying car per year reached a maximum average of about 90,000 for coaches and 54,000 for coach combination cars in 1945, and 157,000 for parlor and sleeping cars in 1946. With the same percentage of occupancy as in 1944 and these maximum average annual mileages, the movement of the coach traffic would require the equivalent of 20,000 full coaches. This is about 1,000 coaches more than were available in 1944 and reflects both the assumed increase in traffic and the slightly reduced average coach seating capacity (from 77 to 75 for full coaches and from 42 to 41 for coach combinations). Present ownership is approximately 2,500 less than in 1944.

Shortage Could Be Critical

To handle the assumed volume of parlor- and sleeping-car traffic would require a total of 9,000 cars. This is some 300 cars more than were actually in service during 1944 and over 2,000 more than were in service last year.

These estimates, starting from a known situation, can be modified in proportion to the reduction in passenger-miles which one may believe will result from the modified military training program. It involves both military and civilian travel, much of which in World War II was related to transfers of military personnel between training bases.

On the same intensity of occupancy and utilization the passenger coaches and coach combinations in service in 1951 would handle approximately 58 billion passenger-miles, or 83 per cent of the coach traffic actually handled in 1944, and present parlor and sleeping cars in service in 1951 would handle 20.4 billion passenger-miles, or 76 per cent of the actual traffic handled in 1944.

In the table showing passenger-train cars ordered from 1934 to 1951 it will be noted that orders were placed for 5,075 passenger-carrying cars during the war years. These included 1,578 military sleeping cars, 217 hospital cars, and 814 troop kitchen cars. Fewer than 100 passenger-carrying cars a year were ordered during 1949 and 1950. This year orders for 248 cars have been placed so far, and these include 65 passenger-carrying cars for military service.

Passenger cars have received relatively little attention during the past year in the general preoccupation with the effort to secure steel enough to build freight cars at an adequate rate. However, requests for material for 100 passenger-train cars have been made of government authorities for each of the third and fourth quarters of 1952. The easing of the steel situation is reflected in the allocation of materials for the production of 189 passenger-train cars during the third quarter. At these rates of production, however, the prospect of acquiring enough new passenger cars during 1952 to offset retirements seems quite remote.

Passenger tariff research program cuts printing costs, makes ticket seller's job easier—Book ticket gaining in popularity

A Pennsylvania ticket clerk is shown examining tape received on key box Teleprinter showing reservation space assignment received from the reservation bureau at Pennsylvania Station, New York. This is a part of the "Intelex" system now being installed by the railroad to facilitate and speed up ticket sales and reservations.

Progress in Ticketing and Handling of Reservations

New ticketing machines, improved systems of reservation handling, book type tickets, simplified schemes for refunding for unused portions of the passenger's ticket, simpler tariffs and division sheets—all these developments promise to cut the cost of passenger service as well as to make things easier for the passenger to get his "transportation."

Several roads, including the New York, New Haven & Hartford, New York Central and the Chicago & North Western, are at present—or soon will be—experimenting with an automatic ticket issuing machine. Meanwhile, passenger carrying roads are watching with interest the adaptation of the "Intelex" system of reservation handling which the Pennsylvania began using, experimentally, almost two years ago at Pennsylvania Station in New York. Similarly several of the western roads, but particularly the Union Pacific, are more than happy with the book type ticket. There is working now, too, a joint committee of passenger traffic and accounting officers which has made considerable progress in passenger tariff simplification and preparation of division sheets.

The New Haven recently began using the Burroughs "Ticketeer," a matrix-operated automatic ticket issuing machine. At present three are in service at Grand Central Terminal in New York, and the New Haven has ordered more of them for use at New York and other stations. While it is still a little early for any definitive evaluation of the machine's worth to the railroad, it seems likely that at least in passenger ticket accounting the machine will be a time and money saver for auditors of passenger traffic. Other advantages are still to be determined.

The Pennsylvania's reservation bureau at Pennsylvania Station in New York handles about 8,000 transactions per day. Most of these are now being handled by the "Intelex" system much more speedily than reservations were handled heretofore. At present it takes the average patron at the ticket window only about 1½-2 min. to find out from the ticket clerk whether or not he can get a reservation and which space he will have. The process is essentially a simple one. The clerk at the window, after finding out from a recording machine whether or not space is available, puts the request for the reservation, in code, into the machine shown in the accompanying illustration. The request is transmitted by the machine to the reservation clerk in another part

(802) ISSUED BY
UNION PACIFIC RAILROAD COMPANY

TICKET | COUPON 1 | FORM X-6 | 0

NON-TRANSFERABLE
Sold Subject to Tariff Regulations—Good For One Passage

To JACKSONVILLE, FLA.
(DESTINATION)

This ticket expires 1-6 1950

SELLING AGENT

SAMPLE

STAMP

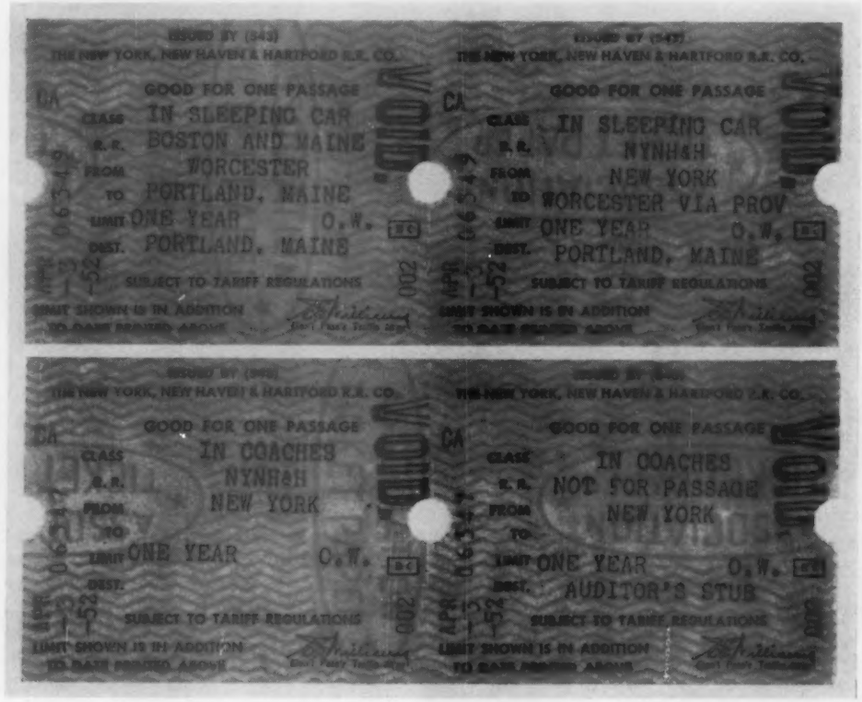
FARE $ 121.85 O.W.
TAX $ 18.28 X
TOTAL $ 140.13 ½
C
O
P

GOOD FOR ONE PASSAGE—VIA RAILROAD AND BETWEEN THE POINTS OUTLINED BY HEAVY RULE

FROM / TO	F	C	VIA RAILROAD
DENVER, COLO.			
COUNCIL BLUFFS			UN. PAC.
CHICAGO			C & NW
WASHINGTON, D.C.			B & O
RICHMOND VA.			RF & P
JACKSONVILLE			ACL
ALBANY, GA.			ACL

BAGGAGE ☐

To issue the book ticket clerk needs only a ball-point pen and dater. There's one coupon for each road in the route. Coupons are the size of a dollar bill.



Two samples of the matrix-printed interline ticket. As many as five coupons may be printed with one matrix of the automatic "Ticketeer." Here the upper ticket is for an interline trip while the lower one is for on-line coach transportation.

of the station and is reproduced there by a Teletype printer.

At the same time the coded information is received by the reservation clerk a file opens automatically to the space diagrams for that train for the given day. The clerk merely marks down in the diagram the indication that the space has been sold and picked up, then sends the designation of the space over a Teletype transmitter back to the clerk at the window, who then proceeds to make out the ticket for the passenger. Almost exactly the same procedure is followed by the telephone clerks if the prospective passenger phones in from outside the station. Of course, the passenger still must come in to pick up his tickets after space has been assigned to him.

Western roads have found that the book ticket is the answer to many of their difficulties. It is easy to sell, they say, and frequently allows the ticket clerk to prepare the passenger's ticket much more quickly than did older forms. In addition, they find it considerably easier and less expensive for their passenger auditing departments to handle. (Recently, all the hotel ticket offices in Chicago went entirely to the book ticket except in a few cases where issues of the card type ticket to "local" destinations were large enough to justify continuance of some completely preprinted forms.) If this type ticket were to be adopted by all lines, some railroad men say, tremendous savings in ticket printing costs would follow, as would savings from decreased purchases of ticket

A small portion of the work force in the New York Central's reservation bureau at Grand Central Terminal, New York.

cases and drawers, less ticket inventorying time, etc. Union Pacific officers say they have had many favorable comments from passengers on the speed with which such tickets are issued.

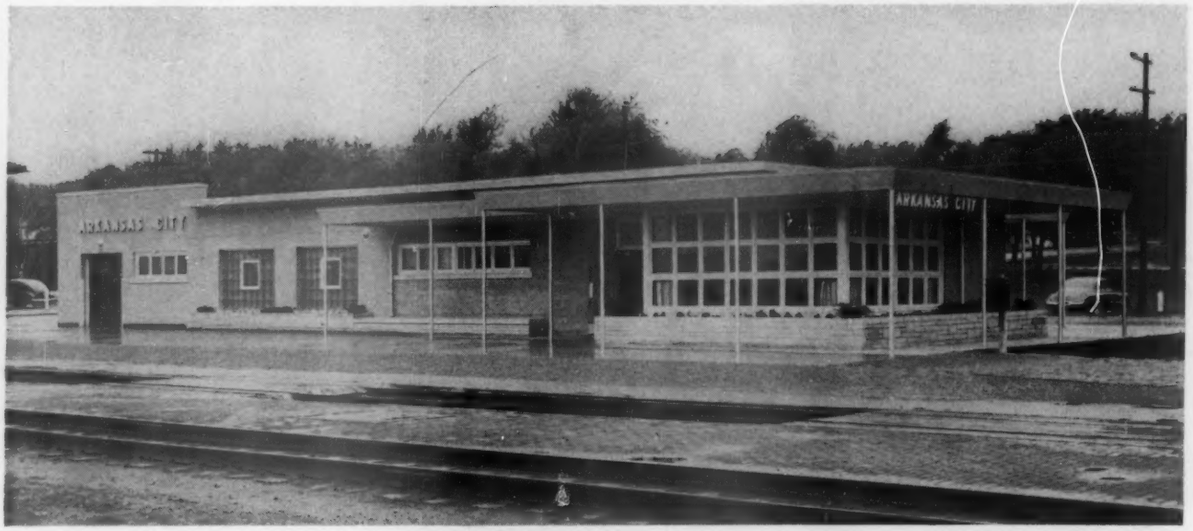
Frequently portions or whole tickets are not used after they are purchased by the passenger, who naturally wants his money back. The New Haven has made it about as simple as can be to deal with such cases. With some exceptions, any ticket sold by the New Haven can be redeemed by the passenger at *any* New Haven ticket office immediately upon presentation. Tickets not issued by the New Haven and those excepted tickets not handled at all offices may be redeemed at Boston, New York or New Haven. However, if the customer does not care to, or cannot, go to one of these cities his local agent will forward the ticket to the redemption office in Boston, which will mail the patron a check.

Before a ticket is sold—and after its sale—there is a lot of work involved on the part of the tariff compilers, the ticket agent who has to read the tariff and the accounting department personnel who must, in the case of interline tickets, divide the revenue among the roads participating in the haul. The agent must, of course, use his price list or tariff in selling the ticket, while accounting department clerks must use what are known as division sheets to divide the revenue among the various roads. In years past both these jobs have become increasingly difficult. As a result, 1951 saw the formation of a joint committee of passenger traffic and accounting officers to simplify both types of publication.

In examining both tariffs and division sheets the committee found in them much material that was irrelevant and no longer applicable. For example, routes no longer in existence still were carried in tariffs. Frequently, moreover, agents still built rates around these routes. This required a lot of time and frequently lost some revenue to the railroad because over those old routes low fares were in force to meet competitive conditions which no longer exist. Too, they demanded extra time from the division clerks. The committee has pointed out these conditions to the railroads and some roads have taken steps to correct them. The Union Pacific, for example, was able to reduce the cost of printing one local tariff by more than 50 per cent simply by eliminating from that document irrelevant material. The Pennsylvania reduced its passenger tariffs from 147 to 35.

Designating certain ticket windows not only for classes of accommodations desired but in some cases for "today's" and "future" travel has helped eliminate passenger annoyance.

The railroads are leaving few stones unturned in their efforts to economize all phases of handling tickets and reservations, while at the same time trying to cut to the bone the amount of time the prospective passenger must stand in line waiting for his ticket or reservation. Even if much still remains to be done in gaining maximum efficiency in both these fields, substantial progress is being made and the future looks bright.



ARKANSAS CITY, KAN.—The Santa Fe's new station typifies the simple elegance obtainable in the modern "ranch-house" type of small station. It's a nice place to work and an attractive addition to the town's front yard.

Modern Stations Promote Good Will

Attractive structures with convenient facilities invite passengers, and give them an incentive to use railroad service again

Throughout the United States and Canada, the railways are continuing their efforts to provide modern, pleasing stations for their traveling customers. In the up-to-date trend, most of these stations are dedicated on the premise, as stated by W. G. Vollmer, president of the Texas & Pacific, that "improved station facilities not only enhance the good will and respect of the public, but have a stimulating effect on the morale of the employees directly involved."

Mr. Vollmer has argued his case well by suiting action to words and embarking on a long-range program for the improvement of T. & P. passenger stations. This program, begun in 1947, had resulted by 1950 in the modernization of eight stations and the construction of a new structure. At that point, Mr. Vollmer stated, "I consider the money we have invested in our station-modernization program sound and profitable, and we propose to carry it forward to the extent that business and financial conditions warrant." His railroad has continued to modernize stations since then.

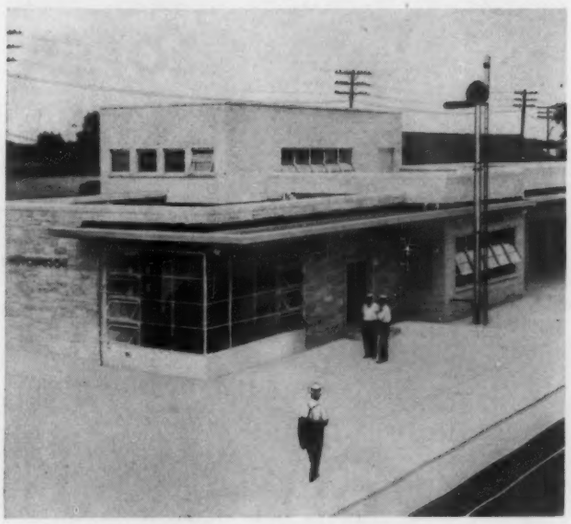
Most other roads, each to its own circumstances, have been adhering to the same general principles as the T. & P. in the modernization of stations. For their efforts they, too, have been achieving good will and encouraging higher employee morale. The general trend in passenger-station improvement is demonstrated by the accompanying illustrations. All the stations shown were built new or modernized within the past year. Most of them are typical of other stations revitalized during the year but not illustrated.

Aside from the strictly local influences so evident in some of these typical examples, they all reflect the modern movement toward a simplified form of architecture, devoid of "gingerbread." Frilly ornamentation is gone and little that does not have utility is left. In the place of ornate decoration, especially on the exteriors, these modern stations emphasize fenestration. This bold fenestral treatment, characterized by window walls or glass-block panels, decorates otherwise simple exteriors, improves illumination, and gives an impression of spaciousness to relatively small waiting rooms. With what other single medium could architects accomplish so much so attractively?

Except for a few colonial-type stations, a definite trend is noted toward flat or shed-type roofs with overhanging canopies. By eliminating the gables and cupolas that were so popular long ago, but which have been considered to "date" old stations, the newer structures conform to the "ranch-house" type of home construction and thereby blend with modern community planning.

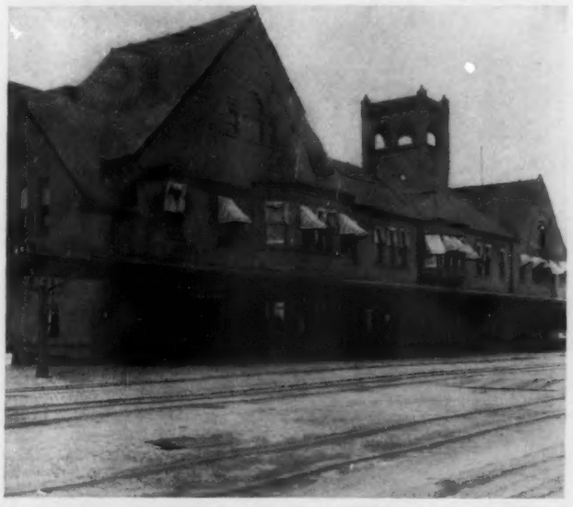
For this reason, the single-story station is popular with local chambers of commerce and, because it is also economical to maintain, it is welcomed by railway boards of directors. Couple these advantages with the fact that such stations please both travelers and the employees who work in and around them, and there is little wonder that this type of construction has well established itself.

It would not be surprising if prospective customers



HUTCHINSON, KAN.—Built with simple lines, window walls and contrasting materials, this new station on the Rock Island emphasizes compactness and efficiency.

OSHKOSH, WIS.—"By gosh, that's an attractive little station," must surely be the comment of Soo Line patrons in the "over-alls" town.



OTTUMWA, IOWA—Before modernization, the Burlington's station was uninviting and dated by its gables, cupolas and tower.

OTTUMWA, IOWA—Day or night the new station stands out as a fitting structure to complement the "Zephyrs" it serves.

WAITING ROOM of the new Ottumwa station has "club-like" appointments matching modern train interiors.

WAITING ROOM of the Soo's Oshkosh station, like many others, features comfortable furniture and picture windows.

PUTNEY, VT.— Neat little colonial stations like this now dot the New England countryside by virtue of the Boston & Maine's program to streamline passenger stations.

BIG SPRING, TEX.—Ticket windows are becoming things of the past on the T. & P., replaced by convenient counters in all remodeled or newly built stations.

CITY TICKET OFFICE of the Union Pacific at Beverly Hills, Cal., serves customers at dignified "conference" desks, custom-made for efficiency.

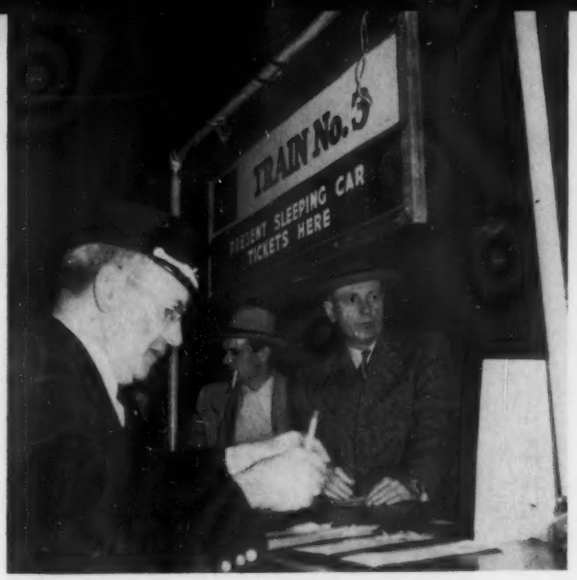
PICTURE WINDOWS make the Frisco's attractive new city ticket office a graphic advertisement for the railroad in the heart of St. Louis, Mo.

were even more pleased with the improvements that are being made to the interiors of stations than with the exteriors. For within the modern station their convenience and comfort come first. With a pleasant experience to initiate the journey, traveling becomes the joy it is advertised to be and not the tribulation that obsolete, uncomfortable and troublesome facilities sometimes can make it.

To purchase a ticket in a modern station, the customer no longer has to overcome the obstacle of a row of barred wickets, securely boarded up, sometimes appearing to be guarded by a secret and well-hidden spring lock. Instead, he can walk to an attractive open counter, directly at the spot nearest to the agent, and elicit the traveling advice he seeks. If there is a wait until train time, he can rest, seated on a comfortable chair or settee in surroundings comparable, in many cases, to a "club" atmosphere. Served so well by employees, also made pleasant by such surroundings, that man becomes a repeat customer and one of the railway's best salesmen. Ask him if station modernization pays.

City Ticket Offices

The trips of many travelers start at a city ticket office, not at a station. The better to serve as activated advertisements for the owning railways, these offices, although always well-appointed, have also been getting their "faces lifted." Since they are frequently "sandwiched" between railway competitors, or perhaps amid air line offices, their attractiveness must reach enticing proportions. At the same time, convenience to customers whose time is at a premium is essential. The manner in which these requirements have been satisfied recently is typified by the city offices illustrated. Here, too, good will is king.



A railroad ticket buys a trip . . .

. . . nineteen times as safe as in the family car

. . . three times as safe as by air.

Safety Is Salable—

What Are the Facts?

In almost every testing of the attitude of the public toward *railroad* travel, SAFETY comes up as the biggest consideration—along with dependability and comfort. In contrast, in a number of recent samplings of opinion regarding travel in general, by all modes of transport (including the family car), made on behalf of magazines of general circulation, safety of movement did not measure large as a "write-in" factor in choice of medium of travel.

This would indicate that:

(1) People naturally think of railroads as a safe mode of transport and appreciate its importance when they think about riding on trains—*if* their attention is called to it as a factor.

(2) As a *spontaneous* consideration, safety of movement does not bulk as large in the public consciousness as do other considerations—like speed, convenience, fare, etc.

The job of the railroads, it would appear, is to exploit their widespread reputation for safety—not only by reminding people about it, but to keep people conscious of the importance of safe movement as a factor in choice of their medium of travel.

How this should be done gracefully, without seeming to be macabre, and without unfair, spiteful maligning of rival transport agencies, is a task for good copywriters and experts in semantics. It may be supposed that everybody is agin' death and injury; also, that every agency of transportation does its best to attain the safest possible movement.

The point which pays off, however, is that, because of the natural conditions surrounding the movement of trains on tracks, absolute central control of all movements on right-of-way, and 125 years' experience running trains, the railroads have a big edge over anybody else.

Maybe it would be smart to "go light" on the record of air lines and buses—which are improving their safety record—and "shoot the works" on the family automobile—which definitely is not.

Anyway, here is the railroads' salable story about safety: In 1951, on the basis of passenger deaths per 100 million passenger-miles, the ratio on the railroads was 0.4 and that on the scheduled air lines, 1.3. Figures for 1951 casualties on buses and in private automobiles and taxis are not yet available from the National Safety Council. In 1950, the bus lines did better than the railroads—with a ratio of 0.17. But this included slow-moving city transit vehicles and school buses, which are not comparable with fast intercity rail movement. In private cars and taxis, the 1950 ratio was 2.2. Both ratios are expected to be slightly higher for 1951.

Thus, the passenger safety record of the railroads in 1951 was three times as good as that of the air lines, although it was not as good as that of the bus lines the previous year. But it was five times as good as that of the family car or cruising taxi. Actually, the record of all the common carrier agencies is so incomparably better than that of private automobiles that they *all* have a good case for merchandising people out of their own cars and into commercial vehicles operated by trained employees.

The railroads' record in 1951 was considerably better than it was in 1950—being 0.41 deaths per 100 million passenger-miles, compared with 0.56 the previous year. In both years the passenger-death toll was accounted for largely by a few individual disastrous accidents. The "normal" rate in recent years prior to 1950 ran about 0.15 deaths per 100 million passenger-miles.

Passenger in the diner uses the intercar telephone to call the observation car to find out if there are vacant seats.

A. S. Hunt, chief engineer communications and signals, Baltimore & Ohio, makes use of the intercar telephone.

Intercar Phones Please Passengers

They save time and annoyance in making reservations in the diner or for obtaining room service—Crews use phones in their work

Intercar telephone service on a number of passenger trains not only provides modern communication facilities for passengers and crews, but makes train travel more pleasant. Train personnel are able to perform their duties faster and more efficiently. Passengers are saved long walks and long waits.

A passenger may walk a long distance to the diner—only to find it full, with the prospect of long waiting. This is passé on trains like the "Twentieth Century Limited," the "Zephyrs," the "Southerner," and the "Cincinnatian." On these trains passengers or attendants, in the observation car for example, can use a telephone to call the dining car steward to find out if tables are available. If the diner is full at the moment, the steward can reserve a table for a later time. Then when the passenger treks to the diner, his table is ready.

Dial Phone for Passengers

On the "Twentieth Century," between New York and Chicago, there is a dial telephone in a wall cabinet in each car, with a list of the numbers and letters to dial. A passenger can call the diner, observation car, or any car in the train. The train secretary has a small office, with an intercar telephone, in the club car near the middle of the train. Next to the secretary's office is the train barbershop. This is convenient because passengers may call the secretary and have him make appointments for them with the barber. Many businessmen travelers call the secretary and make appointments with him for dictation or letter writing.

Some people prefer to have their meals in their rooms, in which case they have the porter call the dining car steward, requesting room service. A menu is brought to them, the waiter takes their order, and returns with the meal. When they are finished, the waiter is called back to remove the dishes. If a passenger wants a drink or a snack in his room, he or the porter can call the dining car steward and make a request, which is promptly fulfilled.

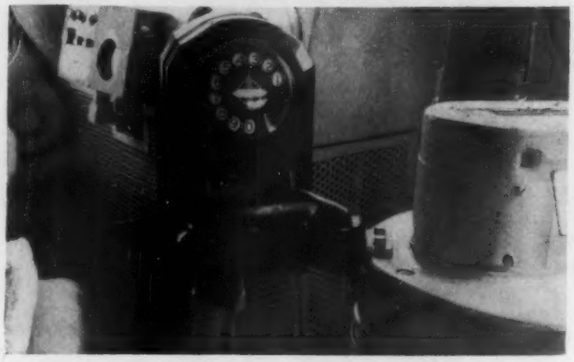
Passengers, when riding through the mountains, often desire to sit in the observation car in order to obtain a better view of the scenery. They can have an attendant call the observation car to find out whether any seats are vacant, before they walk back.

Four "Zephyrs" on the Burlington are equipped with intercar telephone systems: the "Denver Zephyr," between Chicago and Denver; the "Nebraska Zephyr," between Chicago and Omaha and Lincoln; the "Twin Cities Zephyr," Chicago to Minneapolis and St. Paul; and the "California Zephyr," between Chicago and San Francisco. The latter is owned and operated jointly with the Denver & Rio Grande Western and the Western Pacific.

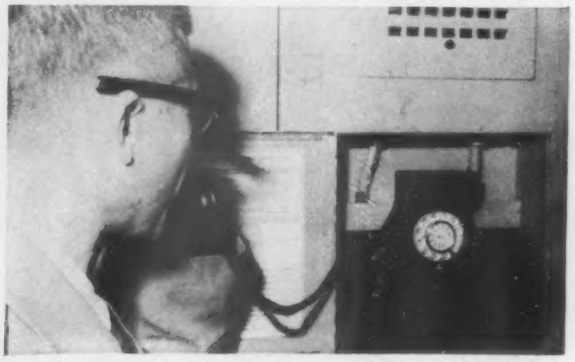
Florida-bound travelers via the Southern may benefit from the use of intercar telephone service on trains such

Dining car steward uses intercar telephone on the "Empire Builder" to take a request for a table reservation.

Taproom steward on the "Denver Zephyr" uses intercar phone to call the dining car to ask for more ice.



Intercar phone in cab of a diesel-electric locomotive provides communication between engineer and conductor.



Passenger (above) on the "Twentieth Century Limited" uses intercar phone to call the dining car steward (below) to make a reservation for a table in the diner. These phones are dial operated and there is one in the end of each car in the train for the convenience of passengers.

as the "Southerner," between New York and New Orleans (P.R.R.-Southern), and the "Royal Palm," between Cincinnati and Jacksonville and Miami (Southern-F.E.C.). Also the Great Northern has equipped the "Empire Builder" and the "Western Star," Chicago to Portland and Seattle (C.B. & Q.-G.N.-S.P. & S.); and the Baltimore & Ohio has just equipped the "Cincinnatian," between Detroit and Cincinnati, with intercar phones.

Helpful to Train Crews

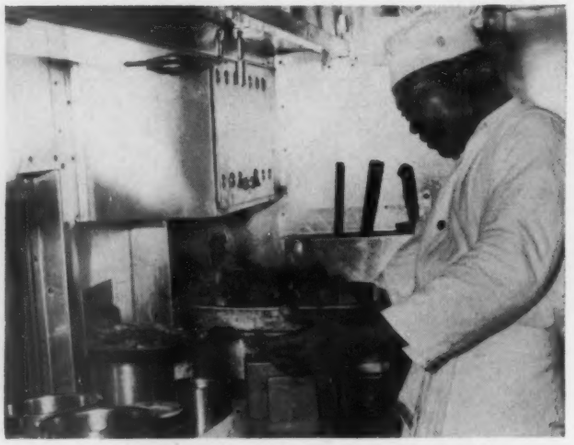
Intercar phones aid the train crews in their work. When a train makes an unusual stop, the phones are used to inform all members of the crew of the circumstances. Furthermore, when the situation is taken care of, considerable time may be saved by using the phone to determine quickly that everybody is on board, so that the train can be started promptly.

Intercar telephones are not adapted to all kinds of runs or services. Some railroads have removed phones from service, after test use demonstrated that they were not sufficiently utilized. On the other hand, a substantial number of roads are convinced that the cost of installing and maintaining intercar phones is justified on certain types of trains, as one of those little extras which make for luxurious train travel and support the slogan "Go the Pleasant Way, Go by Train."

3:29 p.m. "Twin Zephyr" passes the Falls of St. Anthony on its way into Minneapolis' Hennepin Avenue station.

3:31 p.m. On the heels of departing passengers, coach cleaners start work.

3:40 p.m. Electrician goes through the train checking electrical apparatus and making adjustments.



3:40 p.m. Chef weighs in remaining food supplies for the commissary report.

A Case of Fast Turn-around

When a single seven-car train, with its diesel-electric locomotive, may cost $1¼ million, anything which will increase the time during which the equipment can be kept running, and the windows filled with faces, is in the nature of pure gold. This is especially so if, by the saving of critical minutes, one set of equipment can be made to perform more work. Thus it might perform a complete round trip, where only a single trip was possible upon the old dispensation; or it might make two round trips instead of but one in a day or a given interval.

Fast passenger train "turn-arounds"—the reversal, cleaning and servicing of an inbound train, making it ready for an outbound departure—came in with streamliners and are fairly commonplace throughout the country. Of these fast "turn-arounds," the turning of the Burlington's inbound morning "Twin Zephyr" to the outbound afternoon "Twin Zephyr" at Minneapolis is one of the fastest—if not *the* fastest—turn of a long-distance train in the country. The complete process, from arrival time to departure time, is scheduled for 30 minutes.

When a *Railway Age* editor went to Minneapolis —less than five days after the crest of the recent Mississippi flood passed St. Paul—to photograph the procedure, the turn was made so fast he had trouble keeping abreast of it with his camera. Net result: it took three days and three "turn-around" cycles to get the pictures used here.

Actually, the bulk of the interior cleaning and servicing was completed and the work thoroughly and well done in less than 15 minutes. Physical conditions at Minneapolis are particularly favorable for a fast turn. Even so, the key to the achievement lies in unrelenting policing of the on-time performance of the northbound morning train. There is little slack time.

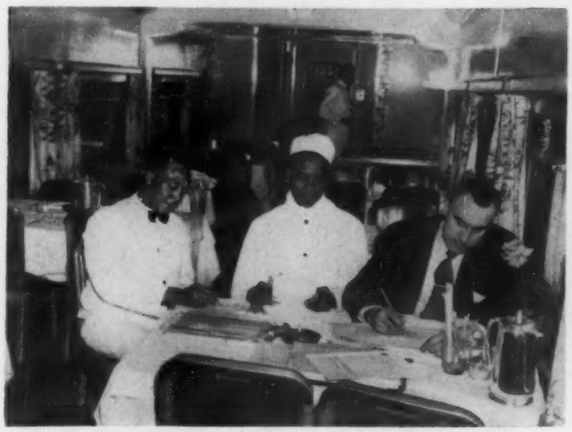
At Chicago, where physical conditions are somewhat less favorable, the inbound morning "Twin Zephyr" turns to the outbound afternoon "Twin Zephyr" in 90 minutes. This time includes 20 to 25 minutes for a trip through a mechanical car washer.

These fast turns enable each unit of the "Twin Zephyrs"—which are strictly daylight trains—to cover 974 miles in a day, or an average of 66 miles per hour, including station and terminal time, from 8 a.m. to 10:45 p.m. This means, in effect, that the gross earnings per car are nearly double what they would be if 4 separate units, instead of two, were used to operate this service.

The Burlington is by no means alone in achieving high car utilization. The case of the Minneapolis turn is a sample of what the railroads are doing to make high priced, luxury equipment work hard.

3:34 p.m. Cars are freshened for their new load, as the train pulls on the wye.

3:38 p.m. Train arrives in the coach yard, and yard crew starts inspecting and watering coaches, and fueling locomotive.



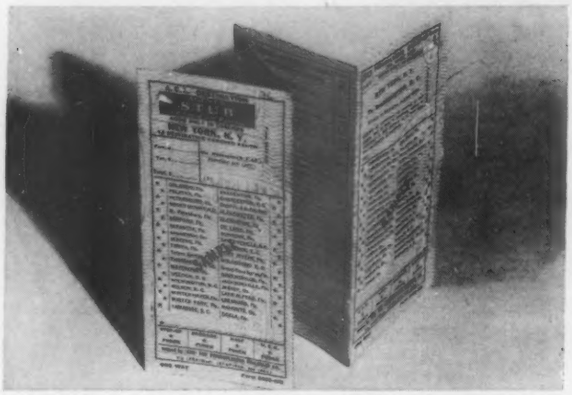
3:41 p.m. Steward, chef and headwaiter work on trip and commissary reports for the morning train.

3:50 p.m. Cleaned, watered, fueled, and readied for its new passenger load, the "Zephyr" pulls into the station.

3:59 p.m. Loaded and ready to leave.

4:00 p.m. Leaving Minneapolis—on time.

Making Service More Appealing



FAN-FOLD INTERLINE tickets, with each coupon measuring about 3 in. by 6 in., are being tried experimentally by the Pennsylvania. These forms are being used from New York to 30 stations in the South. The issuing agent has to write in only fare, tax and total price. Destination stations are arranged on coupons so that one punching takes care of all coupons at the same time.

PARCEL CHECKING LOCKERS permit quick, easy, "custom" checking of luggage on a 24 hours-a-day basis, while earning revenue for the railroad.

AUTOMATIC TICKET PRINTERS—such as the "Ticketeer" of the Burroughs Adding Machine Company here used by sellers of the Chicago & North Western's Chicago terminal—consolidate many details of the ticket sales transaction to save time of both the passenger and the ticket agent's staff.

BOOK-TYPE TICKETS have gained wide favor among both passengers and railroad accounting and passenger officers. Their size is convenient for wallet or purse and for storage in the ticket office. Issued in books of one to six coupons for universal local and interline service (commutation excepted) they have replaced a multitude of older ticket forms. The young lady (left) holds one of the Canadian National's books alongside the strip it replaces.

MODERN TRAIN BOARDS (right) not only dress up the appearance of a terminal but provide essential guidance for passengers who might otherwise crowd the information bureau. This particular board places train information just above eye level.

In 1946

PHOTO BY KARSH

JOHN W. BARRIGER, *President*

"It is obvious that the Monon presents a difficult problem that must be solved. The present management has accepted the challenge because it believes strongly that the Hoosier Line has a definite place and a future among the railroads of America. The great State of Indiana, located at the very hub of industrial America *needs*, and *can support* a modern railroad. While we fully realize the extent of the job ahead of us, we have already blue-printed our plans for the rehabilitation and modernization of the road and are confident of our ability to achieve their fulfillment."

PHOTO BY KARSH

WARREN W. BROWN, *Vice President, Traffic*

"After careful consideration of Mr. Barriger's plans, I am convinced that the Monon has excellent possibilities of developing into a modern, aggressive, profitable railroad. It is my sincere belief that just as soon as the major phases of the plans for the development of the Hoosier Line are completed, and we are able *to prove* that *Monon means business*, we will attract shippers in increasing numbers and really put the Monon *back on the map*."

SIX YEARS LATER

It is with satisfaction that we make the following report to the shippers of the nation. Six years ago the task of rehabilitating the century-old Monon was regarded by many as impossible. Today as these same people see what *has* been accomplished, it is often referred to as "The Miracle of the Monon."

In the past six years the Monon has been completely dieselized. Hundreds of new freight cars have been added and more are on order. The roadbed has been greatly improved. Nearly one-third of the ties in service six years ago have been replaced. Many miles of new rail have been laid. Clearances have long been the highest and widest between the terminals of its lines. Physically the Monon is now both strong and modern. The morale of the road is high and along the right-of-way further proof positive of progress is found in the new industries that are coming to Indiana.

The Hoosier Line will ever be capable, alike of performing economically the services currently demanded by continuously highly competitive transportation conditions and meeting whatever national emergencies future years may bring.

This progress report does not mean that the Monon will ever be satisfied but it does confirm the proud assertion that the *Monon* means *Business*. Success to date and Monon's present position are encouraging but what has been done *is only a beginning*.

The goal of "The Hoosier Line" will continue to be "To build upon the heritage of the century-old Monon a new, modern railroad, perfected to such a high degree of service that it will be preferred over all other types of modern transportation, by both shippers and passengers, in the area it serves."

The Monon management expresses its thanks and appreciation to all those, from friendly shippers and communities and railway connections, to loyal personnel and security holders who have assisted within their respective opportunities to help the Hoosier Line achieve the progress registered over these past six years.

Johnw Barriger
President

MONON

THE HOOSIER LINE

CHICAGO, INDIANAPOLIS AND LOUISVILLE RAILWAY COMPANY

LARGEST FLEET of SUMMER TRAINS
CONVENIENT SCHEDULES • FINE EQUIPMENT • EASY-RIDING TRACK
BREEZE-SWEPT
FLORIDA
AND THE SOUTH
MAGNETIC
NEW YORK
AND THE EAST
MIAMIAN
Pullman-Coach Train—Scheduled for Two Extra Half Days in Florida
EAST COAST CHAMPION
Pullman-Coach Train Serving ALL Florida East Coast Resorts
WEST COAST CHAMPION
The Only Train Exclusively Serving Central and West Florida
HAVANA SPECIAL
Pullman-Coach Train With "Latest Departures—Earliest Arrivals"
PALMETTO
Pullman-Coach Train Between the East and the Carolinas and Georgia
EVERGLADES
Pullman-Coach Train Serving the Carolinas, Georgia and Florida
FIRST IN FLORIDA TRAVEL
Offices in Principal Cities
ATLANTIC
COAST LINE
RAILROAD
"THE ONLY DOUBLE TRACK ROUTE BETWEEN THE EAST AND FLORIDA"

Smart travelers

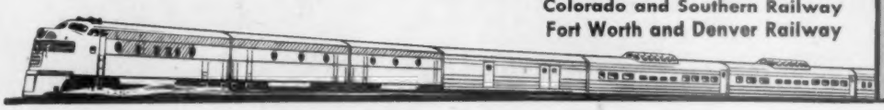
Go Burlington

for *extra* travel enjoyment...

- For a solid endorsement of BURLINGTON passenger progress in action... talk to the business travelers and vacationists who travel the *Way of the Zephyrs.*
- Those folks know that Burlington gives them extra pleasure... extra comfort ... without extra fare. And Burlington passengers agree—*"every Burlington trip is a vacation in itself."*
- In 1934, this railroad pioneered modern passenger service with the first diesel-powered streamlined train. This year, Burlington's streamlined trains will operate over five million miles —a dramatic demonstration of passenger progress in action every day.

BURLINGTON LINES • *Everywhere West*

Chicago, Burlington & Quincy Railroad
Colorado and Southern Railway
Fort Worth and Denver Railway



Burlington Route

The Continental Limited is dwarfed by the mighty scenery of the Athabaska Valley, Jasper National Park, Alberta

CANADIAN NATIONAL
serves all Canada!

All ten Canadian provinces, plus eleven states of the U.S.A. are served by Canadian National, the largest railway system in America.

In addition to 24,000 miles of railway line Canadian National operates a chain of all-year and resort hotels; steamship services to Alaska and to Bermuda and the British West Indies; freight, express and telegraph services.

We'll tell you where ... and take you there!

For information on Canada ask the nearest office listed below:

Boston, Buffalo, Chicago, Cincinnati, Detroit, Flint, Mich., Kansas City, Los Angeles, Milwaukee, Minneapolis, New York, Philadelphia, Pittsburgh, Portland, Me., San Francisco, Seattle, St. Louis, Washington, D.C. In Canada, 360 McGill Street, Montreal, Que.

CANADIAN NATIONAL RAILWAYS

SERVING ALL 10 PROVINCES OF CANADA

1827 1952

PROGRESS WE'RE PROUD OF

on our

125*th* ANNIVERSARY

A century and a quarter ago, the charter for the Baltimore & Ohio, the first railroad in America, was granted. That was a milestone in America's progress, for it helped open the way for the constant expansion and increasing prosperity of our nation.

And during the years that followed, progress never slumbered on the Baltimore & Ohio—the pioneer maintained the pace. Schedules were improved, everything possible for the comfort of passengers and the efficiency of service was introduced.

Here are some of the relatively recent highlights that have made the B&O famous throughout the country for fine travel.

REMEMBER THESE

B&O Feature Trains:

Chicago—Akron—Pittsburgh—Washington—New York
THE CAPITOL LIMITED
THE COLUMBIAN THE SHENANDOAH

•

St. Louis—Louisville—Cincinnati—Washington—New York
THE NATIONAL LIMITED THE DIPLOMAT

•

Detroit—Toledo—Washington—Baltimore
THE AMBASSADOR

•

Detroit—Toledo—Dayton—Cincinnati
THE CINCINNATIAN

•

New York—Philadelphia—Baltimore—Washington
THE ROYAL BLUE

STEWARDESS SERVICE

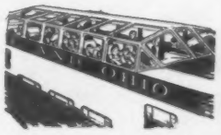
The B&O was the first railroad in the East to introduce the friendly and helpful Stewardess, putting another personal and courteous touch into train travel.

AIR-CONDITIONING

The first mechanical air-conditioned passenger car, the Martha Washington diner, and the first completely air-conditioned train, were placed in service by the B&O.

DIESEL-ELECTRIC POWER

In 1935, the B&O placed in service the first Diesel-Electric locomotive ever to haul passengers on a long-distance run in the East.



THE STRATA-DOME

A travel-pleasure the B&O helped pioneer. The B&O is the only eastern railroad with Strata-Dome cars, and features them on three fine trains.

BALTIMORE & OHIO RAILROAD

Route of the Diesel-Electric Streamliners

Billion-Dollar Dater!

How do you date a billion dollars? Just ask the ticket agents of the United States and Canada. In 1951 they sold a *billion dollars'* worth —a *thousand million dollars'* worth—of the safest, pleasantest travel in the world. Travel by rail!

What's a billion dollars' worth of rail travel? Well, it *could* be one-way coach rides for 33 million people between Chicago and New York.

Also, they collected government *taxes* —and accounted for them and remitted them—to a grand total of some $150,000,000.

Or you might think of it as nearly three million dollars' worth of ticket business *per day*—365 days in the year.

So—do you wonder that our hat is off to these front-line salespeople of the railroad industry—for expert counsel given untold millions of travelers—for ready help in emergencies—and for courteous *service* all the time. We salute the Ticket Agent, whose dater *now* is drumming the cadence of *another* Billion-Dollar Symphony!

And don't forget that this was only part of the picture. Last year ticket agents sold *Pullman* accommodations too, to the tune of $114,000,000.

C&EI CHICAGO & EASTERN ILLINOIS RAILROAD

"...passengers can be as profitable as freight..."

"Although the public will not be fully aware of it for a few more years, American railway passenger equipment is obsolete... for one hundred and twenty years the floor of this obsolete car has been four feet three inches above the rail – the height of the freight platform to receive the first bale of cotton in 1830. There has been no excuse for these high wheels such as the automobile had in the days of high roadway centers, on the railway, smooth as glass...

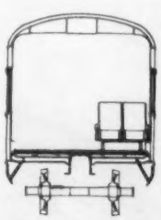
"Train X, two and one-half feet lower at the floor, three feet lower at the roof, designed under railroad supervision by aviation and automotive engineers, gives twice as smooth and safe a ride at one-half the operating cost of the newest present day equipment. Its original cost is only one-third that of present equipment. The Pullman Standard Company, which has spent half a million in building the first model, confirms our optimism; yet, it has stopped further developments because key railroads say Train X will not do because it requires alterations in station platforms. Imagine blocking such a vital defense adjunct here in America because of minor platform changes when our billions alter the face of the world...

"It is said that for every good reason there is a real reason. Are some railroads so annoyed with dissatisfied passengers that they look forward to driving them from the rails? Yet a sympathetic traveling public shrewdly catered to could supply the ideal political lobby – one that could insure friendly regulation.

"Train X could eliminate the passenger loss and at reduced rates boom rail travel, taking a heavy burden off the highways. There are those who go so far as to say that passengers could be made as profitable as freight, for unlike freight, the potentialities are unlimited. Freight which is consumed can be hauled only one way, but travelers must return."

The above are excerpts from an address by Robert R. Young, chairman of the board of the Chesapeake and Ohio Railway and founder of the Federation for Railway Progress, at the Fifth Anniversary Dinner of the Federation, at the Waldorf-Astoria, New York City, March 20, 1952. The complete address in illustrated booklet form is available. For your copy, write to:

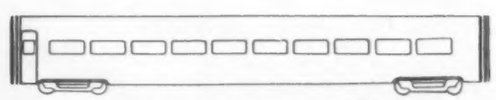
Federation for Railway Progress, Railway Progress Bldg., 1430 K Street, N.W., Washington 5, D. C.



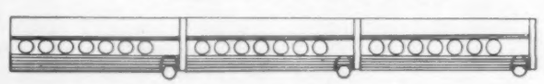
STANDARD COACH CROSS-SECTION

"TRAIN X" COACH CROSS-SECTION

Since heavy, cumbersome trucks are not needed, Train X can ride much lower than a standard coach – its roof can be three feet lower, and its floor can be only 22 inches from the rails.



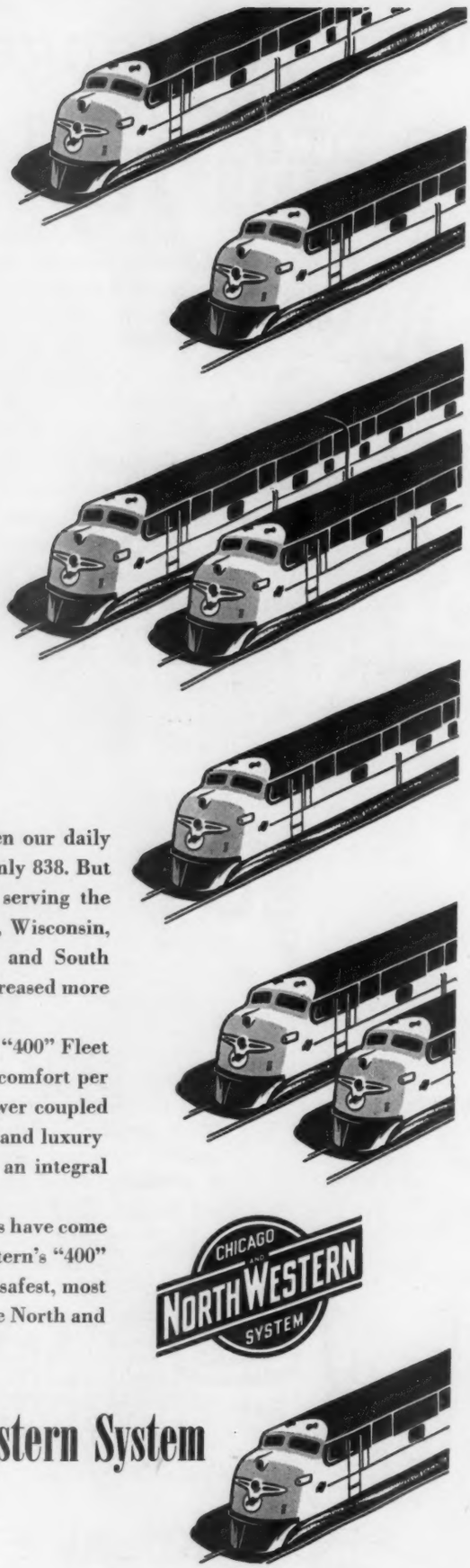
STANDARD RAILROAD COACH 85 FEET LONG



"TRAIN X" COACHES 30 FEET LONG, BUILT ON TRAILER PRINCIPLE

Chesapeake and Ohio Railway

4844 miles daily



The "400" Streamliner Fleet

TWIN CITIES "400"
Chicago-St. Paul-Minneapolis

DAKOTA "400"
Chicago-Madison-Rochester-Huron

FLAMBEAU "400"
Chicago-Ashland Watersmeet

PENINSULA "400"
Chicago-Ishpeming

FAST "400" SERVICE
Chicago-Milwaukee-Green Bay

Time was (back in 1935) when our daily "400" Streamliner miles totaled only 838. But today, with a fleet of "400s" serving the important cities of Illinois, Wisconsin, Minnesota, Upper Michigan and South Dakota, that daily mileage has increased more than five fold!

And as the miles traveled by the "400" Fleet have increased, so, too, has the comfort per passenger mile. Smooth diesel power coupled with modern car construction and luxury food and beverage facilities are an integral part of today's "400" ride.

Small wonder then that passengers have come to depend upon North Western's "400" Streamliner Fleet for the finest, safest, most convenient transportation to the North and Northwest.

CHICAGO AND NORTH WESTERN SYSTEM

Chicago and North Western System

If they're Vacation-Bound

They'll Want To

Travel on the FRISCO!

"Route 'em FRISCO!" and your passengers will have a *Happy Holiday,* right from the start!

If they want fast, smooth diesel-powered trains—here are three of the best on the rails—the FRISCO *Meteor*, the FRISCO *Texas Special* and the *Kansas City-Florida Special.*

If they want to relax in luxury, sleep in comfort, arrive refreshed—they'll have all these plus FRISCO'S Famous Meals.

METEOR

Between St. Louis, Tulsa, and Oklahoma City.

TEXAS SPECIAL

Between St. Louis, Dallas, Fort Worth, and San Antonio . . . Thru Sleeping Cars between New York, Washington and Texas.

KANSAS CITY-FLORIDA SPECIAL

Between Kansas City, Memphis, Birmingham and Florida. Thru Sleeping Cars and Chair Cars between Kansas City and Florida.

5,000 MILES SERVING:

MISSOURI • KANSAS • ARKANSAS • OKLAHOMA • TEXAS • TENNESSEE • MISSISSIPPI • ALABAMA • FLORIDA

Southern Belle®

STREAMLINED HOSPITALITY

between

KANSAS CITY

and

NEW ORLEANS

KANSAS CITY SOUTHERN *Lines*

W. C. CLARK
Passenger Traffic Manager
SHREVEPORT, LOUISIANA

ILLINOIS CENTRAL

Progress for Passenger Pleasure

Chicago Springfield St. Louis

Modern equipment is only part of the story of our Dayliner service between Chicago, Springfield and St. Louis.

The important progress is the art of giving the passenger pleasure. Comfort is part of it. Courtesy is a factor. A smooth, easy-riding roadbed helps. So do tasty meals and a varied menu.

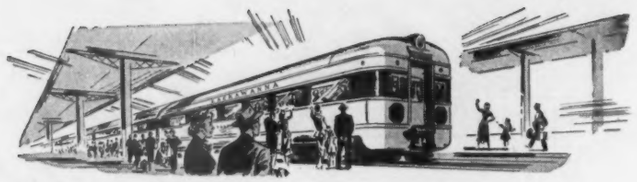
Add to these things a schedule designed for pleasure as well as convenience and on-time performance . . . a schedule that makes speed on the straight stretches and eases gently into the curves . . . always treats the passenger with the consideration he deserves!

The pleasure of the passenger is the most important progress to be made today.

Next time try the Twins—The Daylight, The Green Diamond. Two Dayliners a day each way. Also the Night Diamond—over night.

ILLINOIS CENTRAL
Main Line of Mid-America

Pride of Lackawanna's Great Streamlined Fleet...



THE FABULOUS

Phoebe Snow

2-Way Daily Service between—
NEW YORK, NEWARK, SCRANTON, BINGHAMTON, ELMIRA and BUFFALO

WONDERFUL Reclining Easy-Chair Coache

BEAUTIFUL and Spacious Dining Car

MAGNIFICENT Observation Tavern-Lounge Car open to all passengers

LUXURIOUS Bedroom and Roomette Sleeping Cars

The Shortest, Most Direct Route between New York and the Great Lakes

WESTBOUND
Eastern Standard Time

Lv. Hoboken	9:30 A.M.
Lv. Newark	9:43 A.M.
Ar. Scranton	12:45 P.M.
Ar. Binghamton	1:57 P.M.
Ar. Elmira	3:09 P.M.
Ar. Buffalo	5:45 P.M.

EASTBOUND
Eastern Standard Time

Lv. Buffalo	9:15 A.M.
Ar. Elmira	11:49 A.M.
Ar. Binghamton	1:08 P.M.
Ar. Scranton	2:15 P.M.
Ar. Newark	5:16 P.M.
Ar. Hoboken	5:30 P.M.

There's Nothing Lacking on the

Lackawanna Railroad

THE ROUTE OF PHOEBE SNOW

Symbol of the Finest Rail Service In, To and Through the SOUTHWEST

New Diesel fleet, smoother schedules, equipment improvements from end to end of the Katy system —are pleasing more passengers every day on the finer, faster Katy trains SOUTHWEST. Let our hat remind you to *send 'em Katy!*

ROUTE 'EM TEXAS SPECIAL

SOUTHBOUND			NORTHBOUND
		Frisco R. R.	
Lv. 5:30 pm		St. Louis	Ar. 8:10 am
Lv. 5:40 pm		Tower Grove	Ar. 7:50 am
Lv.		Webster Groves	Ar. *7:37 am
Lv. 8:01 pm		Newburg	Ar. 5:28 am
Lv. 10:40 pm		Springfield	Ar. 2:55 am
		M. K. T. R. R.	
Lv. 2:20 am		Muskogee	Ar. 11:15 pm
Lv. 3:24 am		McAlester	Ar. 10:10 pm
Ar. 5:05 am		Denison	Ar. 8:15 pm
Ar. 6:19 am		Greenville	Ar. 7:16 pm
Ar. 7:18 am		Highland Park	Lv. 6:18 pm
Ar. 7:30 am		Dallas	Lv. 6:10 pm
Lv. 7:45 am		Union Station	Ar. 5:55 pm
		Fort Worth	Lv. 5:10 pm
Ar. 10:35 am		Wichita Falls	Lv. 3:45 pm
Ar. 9:40 am		Waco	Lv. 4:00 pm
Ar. 12:01 pm		Austin	Lv. 1:42 pm
Ar. 1:55 pm		San Antonio	Lv. 12:01 pm

*Stops to discharge revenue passengers from Texas and Oklahoma.

Luxury sleeping car and coach accommodations, world-famous diner meals to please every taste and budget.

Suggest the glamorous Streamlined Texas Special. Daily between St. Louis and San Antonio, through sleeping cars to and from New York, Washington and the East.

M·K·T KATY RAILROAD MISSOURI-KANSAS-TEXAS

THE KATY RAILROAD

NATURAL ROUTE SOUTHWEST

Luxury and privacy combined in Texas Special all-room sleepers.

Roomy Sleepy Hollow seats in Texas Special coaches.

Katy's famous Bluebonnet is now *Diesel Powered*, smoother riding. Route 'em Katy, *the short line* between Kansas City and the principal cities of Texas.

56

Our Average Patron

Enjoys

Above Average

ATTENTION

Whether he be commuter, local or inter-line passenger, the average New Haven patron is our BIG concern. We appreciate the extent of his patronage is in ratio to the effort we expend to provide him the finest of service and transportation facilities.

The New Haven considers it imperative to maintain its schedules so that they are constantly and conveniently adjustable to meet changing demands and conditions.

This summer the New Haven will provide improved service from both New York and Boston to southern New England's most famous resort areas, including Cape Cod, with connections to Martha's Vineyard and Nantucket.

Since the retirement of the last steam engine in March, New Haven passenger trains are now powered by either diesel or electric locomotives.

Most recent addition to the New Haven's modern equipment is a fleet of the Budd Company's Rail Diesel Cars, now operating daily in and out of Boston.

Be sure to route your passengers over the New Haven

RIDE the restful... rapid "Rockets"

on your railroad... the Rock Island

The ROCKETS and their ROUTES

PEORIA ROCKET—
Chicago—Peoria
DES MOINES ROCKET—
Chicago—Des Moines
CORN BELT ROCKET—
Chicago—Omaha
ROCKY MOUNTAIN ROCKET—
Chicago—Denver—
Colorado Springs
TWIN STAR ROCKET—
Minneapolis—St. Paul—
Kansas City—Houston
TEXAS ROCKET—
Kansas City—Ft. Worth
ZEPHYR ROCKET—
Minneapolis—St. Paul—
St. Louis
GOLDEN STATE—
(extra fare)
Chicago—Kansas City—El Paso—
Tucson—Phoenix—Los Angeles

MAKE THE MOST OF YOUR TRAVEL—for business or pleasure. A ride on any one of the famous Rock Island Rockets is a delightful, restful experience. Arrive at your destination keyed to the occasion—be it fun or an important business undertaking.

ROCK ISLAND'S DIESEL-POWERED ROCKETS offer the traveler a variety of accommodations—overnight service includes private rooms and sectional space in Pullmans. Reclining seat coaches, observation lounge and diner, all contribute in providing the finest in rail transportation.

A CENTURY OF SERVICE

Rock Island

It was a marvel in 1852—even more so in 1952

the *Blue Bird* and 15 other Swift, Smooth, Safe DIESEL-POWERED TRAINS

Serving the Heart of America

Modern *speed,* modern *comfort,* modern *safety* are yours when you travel via the Wabash Fleet of sixteen diesel-powered passenger trains. The fleet includes three completely new streamliners. For overnight trips, the Wabash offers the luxury of new Pullmans, with roomettes and bedrooms where you can enjoy greater comfort, convenience and privacy. Coaches have modern "Sleepy Hollow" reclining seats. Diners provide pleasant atmosphere for your enjoyment of superb, reasonably priced meals. Whether your trip is for business or pleasure, you'll like the extra travel value of the modern Wabash Fleet.

The Modern Wabash Fleet of Diesel-Powered Trains

ST. LOUIS-CHICAGO
"Banner Blue"
"Streamliner Blue Bird"
"Midnight"

ST. LOUIS-DETROIT
"Wabash Cannon Ball"
"Detroit Limited"
"St. Louis Limited"

ST. LOUIS-KANSAS CITY
Streamliner "City of Kansas City"
Streamliner "City of St. Louis"
"Midnight Limited"

ST. LOUIS-DENVER-WEST COAST
Streamliner "City of St. Louis"

"Follow the Flag" WABASH

T. M. HAYES, Passenger Traffic Manager
1495 Railway Exchange Building
St. Louis 1, Missouri

MODERN SERVICE IN THE HEART OF AMERICA

ROOMETTES — You'll enjoy new comfort and complete privacy in a roomette on the new sleeping cars on Wabash overnight trains.

BEDROOMS — For extra luxury choose a bedroom, available on most overnight Wabash trains. They're roomy . . . they're private.

COACH COMFORT — Diesel-powered Wabash trains have modern coaches with "Sleepy Hollow" seats, offering you luxury at low cost.

MODERN DINERS—The food is superb, the surroundings delightful, the prices reasonable. You'll remember your meals with pleasure.

Courtesy

STARTS AT THE "HEAD END"

In the cab of the powerful Diesel locomotive the engineer's experienced hand moves the throttle ever so slightly... and the train is on its way with a start so smooth it's hardly noticed by the passengers.

This courteous salute from the "head end" is typical of the considerate treatment found everywhere on Seaboard trains. Engineers and firemen, conductors and trainmen... Registered Nurses and Passenger Service Agents... dining and lounge car personnel ... Pullman staff and other attendants—all contribute their cheerful, attentive efforts in a pleasant conspiracy to make traveling to and from the South really enjoyable. Their attitude says, "Welcome aboard!"

For courtesy, you know, is traditional on every Seaboard train.

THE ROUTE OF COURTEOUS SERVICE

UNION PACIFIC RAILROAD

FOR YOUR TRAVEL PLEASURE BETWEEN

Chicago and California

Streamliner "CITY OF LOS ANGELES"

COACH PASSENGERS have reserved seats with modern leg-rest and use of the comfortable cafe-lounge car with current periodicals and writing desk.

PULLMAN PASSENGERS have wide choice of accommodations, excellent dining car service, club-lounge and observation cars.

ALL PASSENGERS . . enjoy the finest of fresh, western-grown foods, expertly prepared and served . . . a super-smooth roadbed . . . fast, 39¾ hour schedule between Chicago and Los Angeles . . . delightful stopover points like Salt Lake City . . . Las Vegas and Hoover Dam . . . de luxe motor coach between East Los Angeles Station and suburban points such as Pasadena, Glendale, Anaheim, Long Beach, San Pedro.

IN ADDITION TO THE **"City of Los Angeles"** THERE ARE THE DAILY STREAMLINERS

"CITY OF SAN FRANCISCO"
(Fastest train between Chicago-San Francisco)

"CITY OF ST. LOUIS"
(Between St. Louis-Kansas City and Pacific Coast)

•

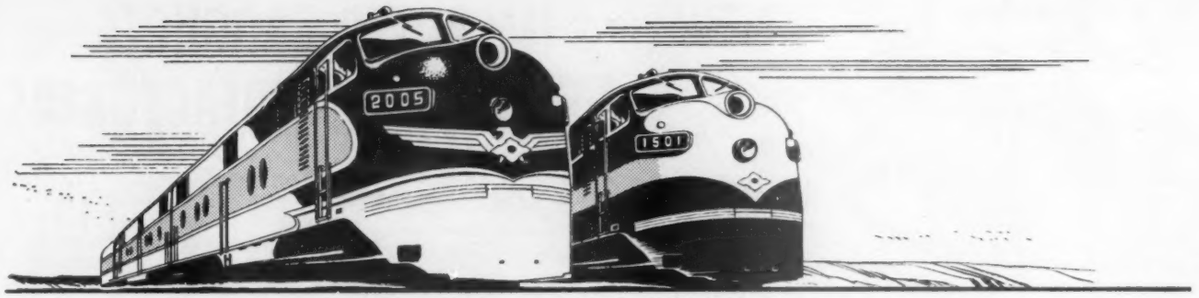
ALSO IN DAILY SERVICE—
between Chicago and California—**LOS ANGELES LIMITED . . . SAN FRANCISCO OVERLAND . . .** and **GOLD COAST.**

Between Chicago and Denver, the overnight, every-night Streamliner **"CITY OF DENVER."**

COAST TO COAST
Through Pullmans without change of cars between New York City and Los Angeles, or San Francisco. Bedrooms and Roomettes.

UNION PACIFIC RAILROAD

ROAD OF THE DAILY STREAMLINERS



NOW...T&P MEANS... TOP-POWERED SERVICE!

TEXAS AND PACIFIC 100% DIESELIZED

Cinder in her eye? Young man, the T&P's 100% dieselized!

In 1858, the Southwest was a vast, unsettled frontier. That year the first train of a little pioneering railroad that became the forerunner of The Texas and Pacific Railway was powered by two oxen...

Shortly thereafter, wood-burning locomotives supplied the power for the little trail-blazing T&P. In turn, this power was supplanted by coal-burning engines...

Then, in 1928, the superiority of oil as a fuel was recognized by the Texas and Pacific, and "black gold" powered its locomotives...

Now, in 1952, the Texas and Pacific Railway has reached another milestone along its "Route of the Eagles" in the great Southwest. Now T&P is proud to announce top-powered service ... *100% dieselization* of all its train services—passenger, freight and switching.

GO T&P

TEXAS AND PACIFIC RAILWAY

NEW and IMPROVED PRODUCTS of the MANUFACTURERS

Unit Air-Conditioner

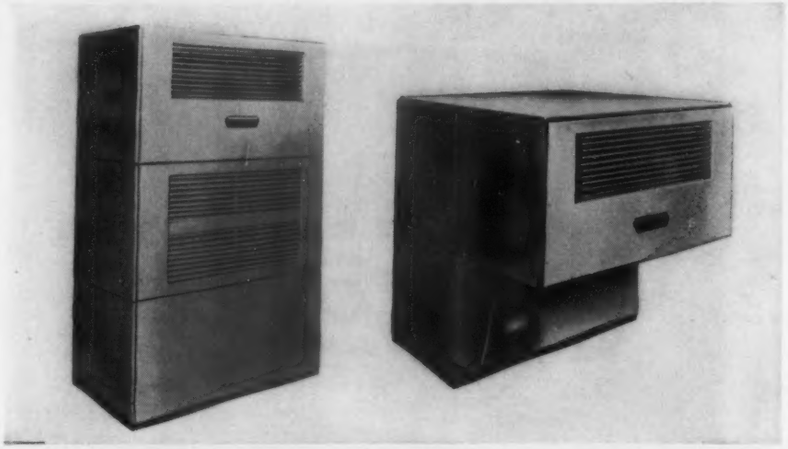
A new Unitaire air-conditioner, the MU-101, is now available from the Air Conditioning Division of Westinghouse Electric Corporation, Pittsburgh. This 10-hp. self-contained unit contains two 12-in. double inlet fans which nominally deliver 4,000 cu. ft. of air per minute.

The fan section, which can be mounted either on top of the cooling section or at the side, can be rotated to give six different discharge arrangements when it is top-mounted. When mounted at the side, five additional arrangements become available, permitting adaptation of this unit to any type installation.

The gray-finished cabinet, which is thermal and sound insulated with glass fiber and aluminum foil, is 91 in. high when top mounted, and 61 in. by 32 in. at the base, making it suitable for fitting into recesses to save floor space. In its side-mounted arrangement, it is 62 in. high.

Adaptability is provided by accessory heating coils, and unit control is provided by a control board with a selector switch and thermostat adjusting knobs.

Other accessories include inlet and discharge air grills, filters, a water regulating valve, and a discharge plenum chamber. Substantial savings over previous models have been made possible by this new design.



Choose your "SEE CANADA" ROUTE...

1. BANFF–LAKE LOUISE ROUTE

The Diesel way between Calgary and Vancouver. You see beautiful Banff and Lake Louise, enjoy mile-high views of mountain grandeur.

3. GREAT WEST EXPRESS ROUTE

Travelling this northern route between Calgary and Winnipeg via Saskatoon and Edmonton, you see Canada's great western oil development on your way East or West. As on all routes, you enjoy traditional Canadian Pacific service and hospitality.

2. COQUIHALLA ROUTE

The southern route through the Canadian Rockies. Now a daylight scheduling over the Coquihalla Pass affords breath-taking picture-window views as you travel between Vancouver and Lethbridge via the Crow's Nest.

4. TRANSCONTINENTAL "DOMINION" ROUTE

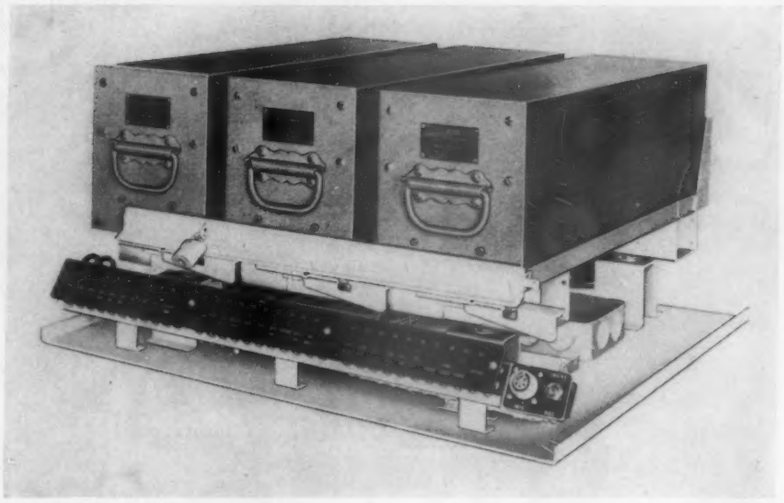
The direct East-West route across Canada. From Winnipeg, through Regina and Calgary–Banff, Lake Louise, you cross the rolling wheatlands and cattle country... you see Canada's scenic West.

Improved Railroad Radio

Bendix Radio, Baltimore, has in production a new line of railroad radio equipment. Designed for operation in the 152-174 megacycle band, the new equipment can be packaged either in the three-unit housing or a single-compact case. The two versions, one of which is known as the "Railmaster" and the other the "Trafficmaster," are electrically identical.

The "Railmaster," which has been designed especially for railroad use, consists of individual plug-in transmitter, receiver and power supply, mounted on a sturdy shockmount. Swivel type inject-eject mechanisms, on the shockmount, permit easy installation, and insure positive mating of plugs.

Bendix is providing the equipment with a choice of transmitter-power — 2½, 12, 25, or 35 watts. In addition, fixed stations can transmit up to 60 watts. The transmitter consists of basic exciter chassis with interchangeable power amplifier decks which, when operated with appropriate power supply, can be replaced at any time to increase power as desired. Dual channel operation can be provided by insertion of sealed plug-in relay and crystal. While supplied for adjacent channel operation on the present 60 kilocycle allocation plan, the receiver can be adapted for operation on the proposed 30 kilocycle spaced channels, or even 20 kc. by replacement of the filters.



Metal Parts Cleaner

A cleaning solution which can be used for the removal of carbonized oil and gums from diesel engine parts has been announced by the Magnus Chemical Company, Garwood, N. J. Known as Magnus 751, the manufacturer also recommends its use for cleaning carburetors, fuel pumps, pistons, rocker arm assemblies, and transmission parts, etc.

It is claimed to be safe for all metals, not attacking, pitting, or marring aluminum alloys, bearing metals, cadmium, solder or any other soft metal. The cleaner can be used in either hot or cold solution and is followed by a simple cold water rinse after the cleaning period. It is non-inflammable.

Where a large volume of parts has to be cleaned regularly, this cleaner works best when utilized in the Magnus Aja-Dip cleaner machine. In this unit, agitation speeds up the cleaning action.

Canadian Pacific Style

5. NORTH SHORE ROUTE

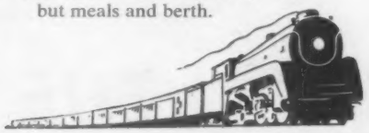
The direct, all-rail route along the rugged, colorful Great Lakes shore. On this scenic section of the Canadian Pacific Transcontinental route, see the rugged North shore.

Canadian Pacific

Information and Reservations: Canadian Pacific, 581 Fifth Avenue, New York 17, N. Y.; 80 Boylston Street, Boston 16, Mass.; 39 South LaSalle Street, Chicago 3, Ill.; 1231 Washington Boulevard, Detroit 26, Mich.; 513 West Sixth Street, Los Angeles 14, Calif.; 185 Post Street, San Francisco 8, Calif.

6. RAIL-WATER ROUTE

The leisurely way East or West between Montreal and Winnipeg. You break your rail trip with a two-day Great Lakes cruise between Port McNicoll and Fort William...your first-class fare covers everything but meals and berth.



Picture this...

new, all dome cars for the *Hiawathas*

The little band of Hiawatha Indians is pre-viewing a brand new kind of car that will enable passengers to look out at the scenery from a glorious vantage point.

Now on the board are ten new dome cars—and what domes! They run the full length of the car, and provide comfortable seats for sixty-eight.

The lower deck of these cars will have booths seating twenty-eight for beverage and snack service.

Some time late this year the new dome cars will operate on the Morning and Afternoon Twin Cities HIAWATHAS, and the Olympian HIAWATHA between Chicago and Seattle-Tacoma. They'll really be something for passengers to look forward to—and out of.

OUT IN FRONT!

HARRY SENGSTACKEN, Passenger Traffic Manager, Chicago 6, Ill.

THE MILWAUKEE ROAD

Route of the HIAWATHAS

San Ildefonso
Ko-Sha-ri
Dancer

great Sights to See

great way to see them

The *comfortable* way to see the most colorful part of America—*really* see it—is on the Santa Fe. Five great trains each day between Chicago, Kansas City and California, through the Southwest Indian country. Every Santa Fe train (serving Fred Harvey food, of course) is planned, equipped and staffed to make your trip such fun you hate to have it end.

Super Chief
Chief
El Capitan
Grand Canyon
California Limited

. . . also the *Texas Chief*, Chicago-Texas
Kansas City Chief, Chicago-Kansas City

Santa Fe

be sure to see
Grand Canyon

Daily Santa Fe service takes you right to the South Rim.

R. T. Anderson, General Passenger Traffic Manager
Santa Fe System Lines, Chicago 4, Illinois

WELCOME TO *New England*

For the vacationer, New England's got everything!

When you are asked about New England, the answer is the Boston and Maine's many and varied all-expense tours — well-planned, economical, delightful.

Mountains — seashore — lakes and rivers — all varieties of sports — thriving cities — gay resorts — beautiful and varied scenery — wonderful summer climate...

And all within an area that can be covered in *a day's travel!*

Everybody enjoys Northern New England!

Send to **W. C. Daly, Boston and Maine Passenger Traffic Department for details of tours and other information.**

Boston and Maine's new, modern Budd Highliners are fast and comfortable.

All Boston and Maine through passenger trains are diesel powered.

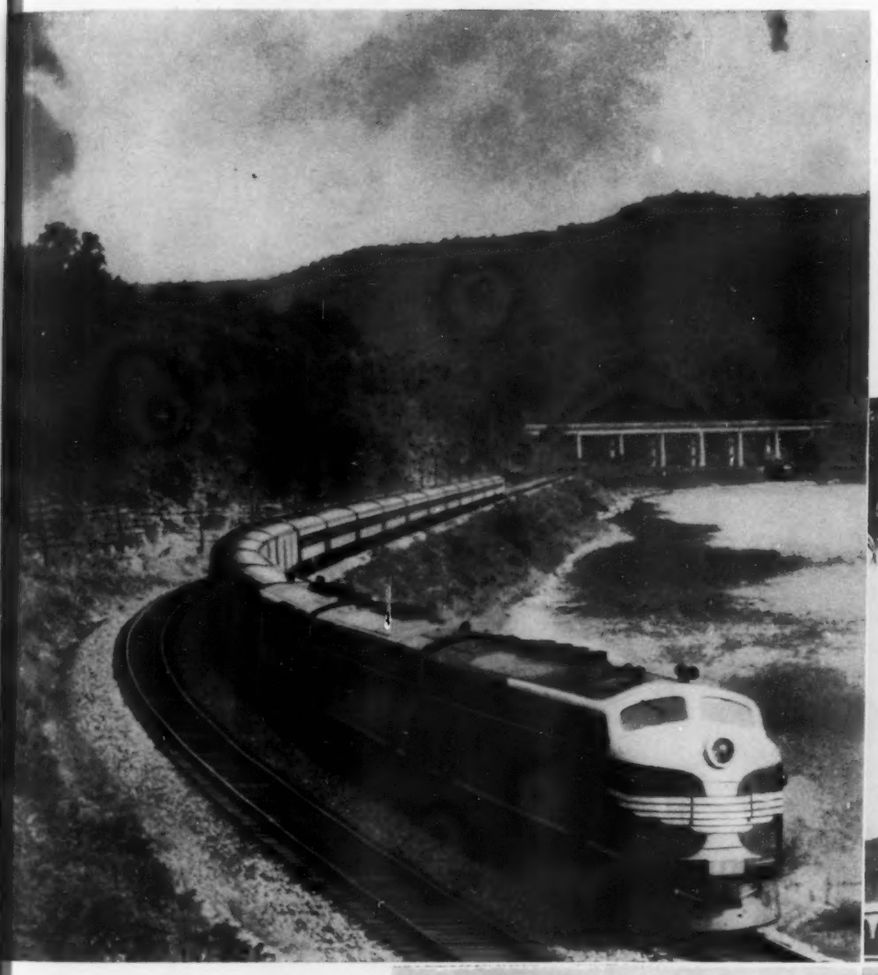
BOSTON and MAINE RAILROAD

"MINUTE MAN SERVICE"

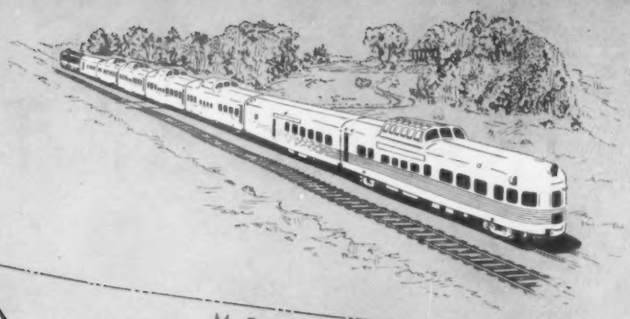
BOSTON *and* MAINE RAILROAD

A Railway Age Feature

TRAVEL BY TRAIN



Photos courtesy Union Pacific, Erie, Florida State Advertising Commission, and NYSPIX—Commerce.



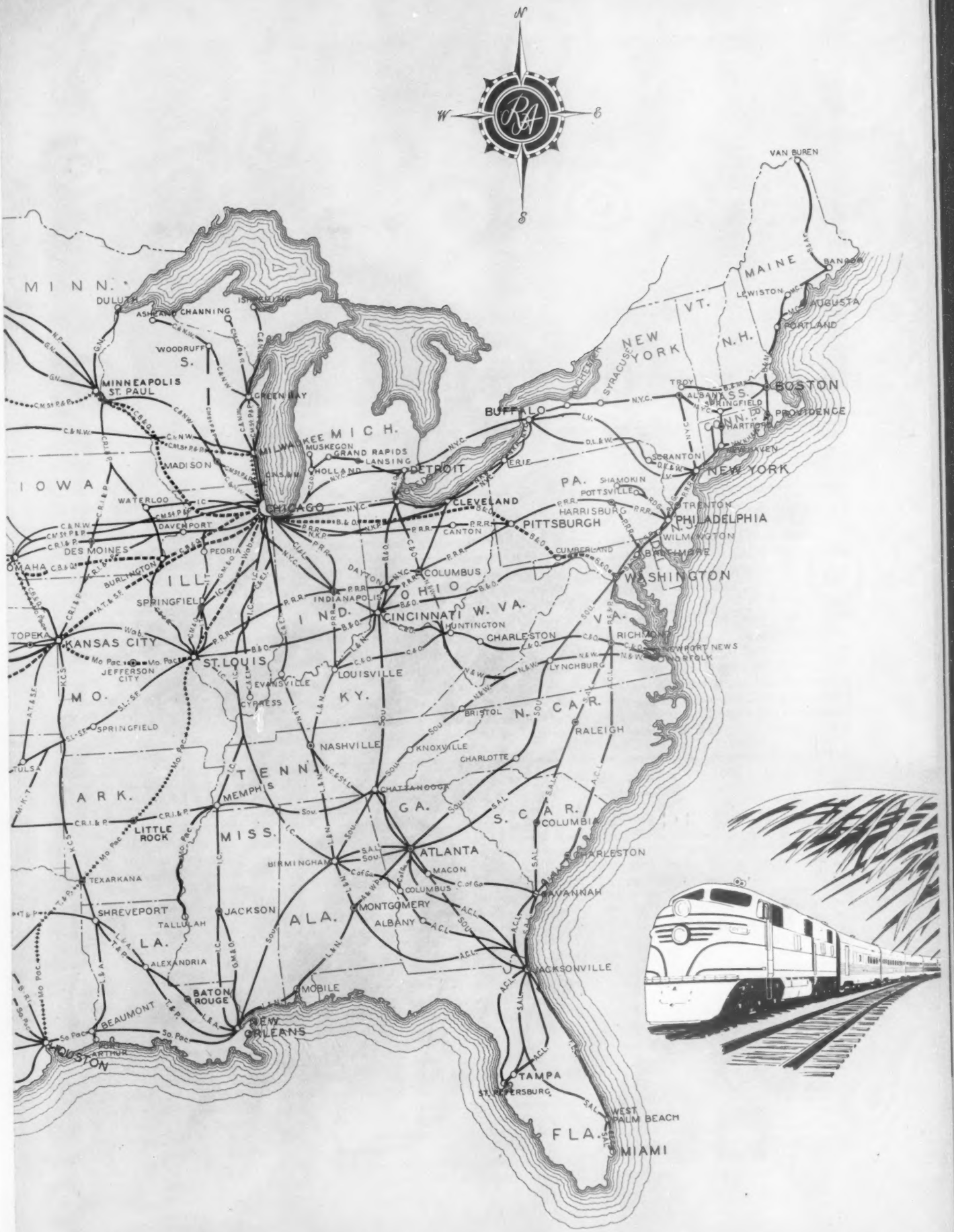
Parade of Streamliners

Routes featuring streamlined trains

Routes featuring streamlined trains with dome cars

Routes featuring streamlined trains which will soon have dome cars

MAP BY RAILWAY AGE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MICH.
MUSKEGON
GRAND RAPIDS
LANSING
HOLLAND
DETROIT
MADISON
IOWA
WATERLOO
CHICAGO
CLEVELAND
DAVENPORT
DES MOINES
PEORIA
OMAHA
ILL.
SPRINGFIELD
COLUMBUS
OHIO
IND.
INDIANAPOLIS
CINCINNATI
W. VA.
HUNTINGTON
TOPEKA
KANSAS CITY
ST. LOUIS
JEFFERSON CITY
CHARLESTON
LOUISVILLE
EVANSVILLE
CYPRESS
MO.
KY.
SPRINGFIELD
BRISTOL
N. CAR.
RALEIGH
NASHVILLE
KNOXVILLE
CHARLOTTE
TENN.
ARK.
MEMPHIS
CHATTANOOGA
GA.
S. CAR.
COLUMBIA
LITTLE ROCK
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ATLANTA
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MACON
TEXARKANA
COLUMBUS
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JACKSON
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MOBILE
BEAUMONT
NEW ORLEANS
PORT ARTHUR
HOUSTON
TAMPA
ST. PETERSBURG
WEST PALM BEACH
FLA.
MIAMI
VAN BUREN
MAINE
BANGOR
LEWISTON
AUGUSTA
PORTLAND
VT.
N.H.
NEW YORK
SYRACUSE
TROY
ALBANY
MASS.
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PROVIDENCE
CONN.
HARTFORD
NEW HAVEN
BUFFALO
SCRANTON
NEW YORK
PA.
SHAMOKIN
POTTSVILLE
HARRISBURG
TRENTON
PITTSBURGH
PHILADELPHIA
N.J.
WILMINGTON
CANTON
CUMBERLAND
BALTIMORE
WASHINGTON
RICHMOND
NEWPORT NEWS
NORFOLK
LYNCHBURG

Alabama State Chamber of Commerce

ALABAMA visitors find much of interest on the grounds of the University of Alabama at Tuscaloosa.

TRAVEL BY TRAIN

On this and the following pages are briefly described and illustrated important vacation resorts, national parks, historic attractions and larger cities of the United States and Canada. Space limitations unfortunately have compelled the omission of many other places of interest. Summaries of railroad service to and from selected major travel centers indicate how conveniently those resorts and cities are reached by train. In general, only regular through Pullman or de Luxe streamline services are embraced in these summaries.

Sightseeing buses and drive-yourself cars are available at the principal cities and resorts to reach neighboring places of interest. Many resorts and scenic areas, particularly the national parks, are included in "package" tours offered by various travel agencies and several Eastern and Midwestern railroads.

ACADIA NATIONAL PARK, on Mt. Desert Island, Maine, combines ocean and mountain scenery. Drives reach scenic spots, typical of Maine's "rockbound coast," and thread evergreen woods to reach the uplands, especially the summit of Mt. Cadillac (1,528 ft.), where there is a splendid view of island-dotted bays, forested mainland, and wide ocean. *Bar Harbor*, gateway to the park, has been a fashionable summer resort for generations. Other resort villages on the island are *Northeast Harbor* (on a fjord, popular with yachtsmen) and *Seal Harbor*. Boats from these quiet ports take out fishermen or sightseers.

ADIRONDACKS mountains, woods and waters (in New York) have appealed to generations of vacationers, health seekers, fishermen and hunters. The region extends from Plattsburg on Lake Champlain to the Mohawk valley near Utica. Gateways are Utica, Watertown, Potsdam, Malone, Plattsburg, Lake George and Amsterdam, on the perimeter, and Tupper Lake, Lake Placid and Saranac Lake in the heart of the mountains. Scenic *Ausable Chasm* is entered at Keeseville. *Lake Placid*, a popular summer resort, is an outstanding winter sports center. The island-dotted lake is surrounded by forests and mountains, through which there are miles of bridle paths and trails. Swimming, golf, and all outdoor summer sports are enjoyed, including ice skating in the arena. In winter the championship bobsled run, ski jumps and outdoor skating rink entice amateurs and experts. *Saranac Lake* has sanatoriums for health seekers, but it also has recreation facilities for summer visitors and ski enthusiasts. The canoe route here from Old Forge, on the Fulton chain of lakes, is perhaps the favorite of all in the Adirondacks. *Tupper Lake*, another center for sportsmen and vacationers, has an annual winter carnival (February). Here, as all through the lake country, fishing is enjoyable. *Ticonderoga*, at the isthmus separating Lake George and Lake Champlain, has a restored pre-Revolutionary fortress of great historic interest. *Lake George* is one of the East's premier beauty spots. Summer homes and camps line its shores, particularly on the west side, and the state has large bathing beaches at the southern end.

AIKEN is a fashionable winter resort in South Carolina's sand hills section, where the mild bracing climate encourages outdoor sports, particularly polo, drag hunts, steeplechasing, golf, trap shooting, fishing, and quail hunting. There are many private estates and winter homes in the vicinity.

ANNAPOLIS, picturesquely situated on the estuary of the Severn river, just off Chesapeake Bay, is Maryland's capital and the seat of the U. S. Naval Academy. As one of the country's oldest cities, it has splendid early American houses. Of these, the Hammond-Harwood house, considered one of the finest examples of Georgian architecture, and the Chase house, both appropriately furnished, are open all year. St. Johns College has a shaded, sloping campus on which stands a great tulip poplar said to be 600 years old. The Statehouse, the oldest in use in the U. S., is a charming colonial structure where George Washington surrendered his commission and the treaty of peace with Great Britain was concluded, formally establishing this nation's independence. The carefully tended grounds of the Naval Academy are open to visitors. Lovers of sailing and boating find Annapolis a hospitable harbor.

Union Pacific

ARIZONA is best known for the vast and colorful Grand Canyon.

Arkansas Development Commission

ARKANSAS visitors enjoy the Ozarks and Hot Springs area all year.

Union Pacific

CALIFORNIA is a state of superlatives, including Yosemite Falls.

ASHEVILLE, N. C., is an outstanding mountain resort, most popular in spring and summer, but visited at all seasons. In the vicinity are golf courses, trails for hiking and riding, rushing streams for fishing, and woods and mountains for hunting. The city is surrounded by mountains, threaded by magnificent scenic roads. Craggy Gardens (17 miles, motor) a Pisgah National Forest recreation area, has a magnificent display of wild rhododendron (mid-June). Chimney Rock (25 miles, bus) is a fine viewpoint looking across the rolling Piedmont section. East of Asheville are *Montreat* (14 miles, bus) and *Ridgecrest* (15 miles, bus) seats of large summer church conferences. The summit of *Mt. Michell*, highest point in eastern America, is reached by automobile road (sightseeing tours from Asheville). A road across Mt. Pisgah also commands a superb view; on the side of this great peak, on the main highway, are the Pink Beds, a great wild garden of azaleas and mountain laurel (bus tours May and June). *Biltmore*, on the edge of the city (motor) is a superb private estate (open all year) surrounding Biltmore house, a great French chateau furnished with museum pieces (tapestries, paintings, porcelain, armor, splendid antiques) with a magnificent view of mountains and forest. West of Asheville (50 miles, bus) is the North Carolina entrance to the Great Smoky Mountains National Park.

ASPEN, Colo., once a mining town, is a year-round mountain resort, particularly visited for its renowned skiing terrain. The lift at Aspen extends 14,000 ft., taking skiers and summer visitors to the top of 11,300-ft. Mt. Ajax (great view). There is a summer music festival.

ATLANTIC CITY, N. J., premier seashore resort of the Northeast and scene of many conventions, has several hundred hotels, most open all year, but the flood tide of visitors comes in July-August. Activities center on the Boardwalk, a wide, plank-surfaced structure of steel and concrete which skirts the ocean shore for 7 miles. On the land side the Boardwalk is lined for 4 miles by hotels, shops, restaurants, auction rooms, salt-water taffy stores, theaters and amusements, while at intervals covered piers extend from it over the water, offering a wide variety of entertainment. Convention Hall, on the Boardwalk, is the world's largest.

BALTIMORE is a historic and beautifully situated city. Charles street has fine shops, and the city's seafood restaurants are famed. In the vicinity of Mt. Vernon place (tall monument to Washington) are the Walters Art Gallery (splendid fine arts collections), Peabody Institute (a leading school of music), the Maryland Historical Society (period rooms, historic documents, portraits) and the Enoch Pratt Library, one of the country's finest. North of the business section are Johns Hopkins University, with modern Georgian buildings and a graceful shaded campus, Loyola College, Baltimore Museum of Art (old masters, period rooms, mosaics), the municipal stadium (Babe Ruth field, seats 60,000), and Druid Hill park. Beyond the park is the Pimlico track, where thoroughbreds race (early May and early November) and north of Johns Hopkins is suburban *Towson*, seat of Goucher College, near which is Hampton, a fine 18th century mansion, ap-

TRAINS TO AND IN CALIFORNIA

Through trains or through cars from New York, Washington, New Orleans, Texas, Colorado, St. Louis, Kansas City, Chicago, Salt Lake City and the Pacific Northwest run direct to major California cities.

SAN FRANCISCO (Oakland) has service by:

Southern Pacific from Portland (Ore.) with through cars from Seattle.

North Western-Union Pacific-Southern Pacific from Chicago via, Omaha, Cheyenne, Reno and Sacramento, with through cars from New York, Philadelphia, Detroit, St. Louis, Kansas City, Denver and Salt Lake City.

Burlington-D. & R.G.W.-Western Pacific from Chicago via Omaha, Lincoln, Denver and Salt Lake City, with through cars from New York and Philadelphia.

Santa Fe from Chicago via Kansas City and from New Orleans via Houston.

Los Angeles-Sacramento service is provided by the Southern Pacific, via Fresno.

Los Angeles-San Diego service is provided by the Santa Fe.

San Francisco-Los Angeles service is provided by the Southern Pacific coast line (via Santa Barbara), Southern Pacific San Joaquin Valley line (to Oakland, via Fresno) and Santa Fe (to Oakland; bus Los Angeles-Bakersfield).

LOS ANGELES has service by:

Santa Fe from Chicago via Kansas City and Lamy (bus from Santa Fe), with Grand Canyon connection and through cars from New York, Philadelphia, Washington, Pittsburgh, Dallas, Fort Worth, Phoenix and Denver.

Union Pacific-North Western from Chicago via Omaha, Cheyenne, Salt Lake City and Las Vegas, with through cars from New York, Philadelphia, Pittsburgh, Buffalo, St. Louis, Kansas City, Denver, Minneapolis-St. Paul and Cedar City (Zion Park bus, summer only).

Southern Pacific-Rock Island from Chicago via Kansas City, El Paso, Tucson, Phoenix and Palm Springs, with through cars from St. Louis, Minneapolis-St. Paul, Memphis, Little Rock and Oklahoma City.

Southern Pacific from New Orleans, via Houston, San Antonio, El Paso, Tucson, Phoenix and Palm Springs, with through cars from Dallas and Fort Worth.

Canadian Pacific

QUEBEC is outstanding among Canada's interesting and accessible cities.

Great Northern

CANADIAN ROCKIES resorts extend from Waterton Lakes beyond . . .

Canadian National

JASPER NATIONAL PARK, where Maligne Lake thrills visitors.

propriately furnished; it is a national historic site. South of Baltimore's business section is Fort McHenry National Monument. This national shrine, overlooking the harbor, preserves the restored 1812 War fort where Key saw the Star Spangled Banner still waving.

BELLINGHAM is a gateway to northwestern Washington resort districts. A scenic highway leads east into Mt. Baker National Forest, passing Forest Service recreation grounds and terminating at *Mt. Baker Lodge* (motor, 59 miles), a center for outdoors life, riding, fishing, mountain climbing (Mt. Shuskan and Mt. Baker, both hazardous), and skiing (tow). Another scenic road is Chuckanut drive, south of Bellingham, with superb views of Puget Sound. Larrabee State Park, on the shore, has views, too, and salt-water fishing and bathing. Passenger boats run from Bellingham through the San Juan Islands.

BERKSHIRE resorts cover a large area of western Massachusetts. Principal centers are *Pittsfield, North Adams, Williamstown,* seat of Williams College (elm-shaded grounds, beautiful white-spired church), *Lenox* and *Stockbridge,* surrounded by fine estates, and *Great Barrington* (Mt. Everett, a state reservation popular for hiking and winter sports is 8 miles south by motor). Beartown State Forest, east of Great Barrington (motor, 7 miles), also has winter sports facilities, and visitors in early summer enjoy the blooming of azalea and laurel. Near Lenox is *Tanglewood*—an estate transformed into a summer music center, with a series of concerts by the Boston Symphony orchestra. Mt. Greylock, reached from North Adams (motor, 8 miles), is Massachusetts' highest point.

BIG BEND NATIONAL PARK, in Texas, is a rugged wilderness area with spectacular desert and mountain scenery. Particularly noteworthy are the deep, sheer-walled canyons of the Rio Grande and its tributaries. Most of the region is inaccessible and development is only beginning. From Marathon, on the Southern Pacific main line, a circuit trip through the park is practicable by bus or motor (fall, winter or spring).

BLACK HILLS of South Dakota include wooded mountains, enticing lakes, vast caverns, a sanctuary for Rocky Mountain sheep, miles of trout streams, and facilities for camping, hiking, boating and horseback riding. Circuit trips in the area are available, starting at Rapid City (Milwaukee and Chicago & North Western service) or at Newcastle, Wyo., on the Burlington's Kansas City-Billings line. *Belle Fourche* has a big July 4 "roundup" with many cowboy participants. *Spearfish* stages the Black Hills Passion Play each summer. *Deadwood,* an old mining town, has a "Days of '76" celebration (rodeo, "wild west" acts, parade) early in August; strangers are shown the graves of Wild Bill Hickok and Calamity Jane. *Custer* is the gateway to Custer State Park, which protects some of the most scenic sections of the Black Hills, including beautiful Sylvan Lake, and herds of buffalo, deer, antelope and elk. South of Custer is *Wind Cave National Park,* where rangers conduct visitors through characteristic cavern chambers and galleries. *Hot Springs,* southern gateway to the Black Hills, is a health resort (large warm water plunge). Near the summit of *Mt. Rushmore,* between Sylvan Lake and Rapid City, is a colossal carving of the heads of Washington, Jefferson, Lincoln and Theodore Roosevelt, a great memorial in enduring granite.

BOSTON is one of the oldest and largest American cities. Sightseeing bus tours supplement local subway, elevated and surface transit, but many places in the historic, crowded downtown section are best reached on foot. The Statehouse on Beacon Hill looks over winding streets of the old city and the harbor. There are well-preserved early American houses on Beacon Hill. Historic public shrines downtown include the old colonial statehouse; Faneuil Hall; and Paul Revere s home, built 1660. In the Charlestown section are Bunker Hill monument, and, at a Navy Yard pier, the rebuilt historic frigate "Constitution." Noteworthy among Boston's churches are Old North Church, where the lanterns were hung for Paul Revere; Old South Meetinghouse, with colonial relics; and Park Street Church, with the adjacent Granary Burial Ground (Paul Revere, John Hancock, Samuel Adams and other patriots). Museums include the Massachusetts Historical Society; the Museum of Fine Arts, one of America's very best and a "must" for art lovers; and the Gardner Museum, a Venetian palace with a notable art collection. Parks include the Common; the richly landscaped Public Gardens, where swan boat rides thrill youngsters; Marine Park, with an aquarium and yacht club quarters; the botanical treasures of the Arnold Arboretum; and Franklin Park with the city's zoo. Educational institutions include Boston University; Simmons College (women); Northeastern University; New England Conservatory of Music; and the Boston Latin School (founded 1635). *Cambridge* is reached by the Boston subway. Here are three great schools,

Massachusetts Institute of Technology, Radcliffe and Harvard, with one of the nation's finest libraries, superior collections of prints and other fine arts, and a rich variety of exhibits in natural history, in which visitors find of great interest the remarkable collection of Blashka glass flowers. Cambridge is particularly rich in literary associations (homes of Lowell and Longfellow). Suburbs on the fashionable and beautiful *North Shore* are reached by Boston & Maine train or sightseeing bus. *Swampscott* has the fine estates and gardens of an old residential community, and *Marblehead* is a popular summer resort and yachting center on a beautiful rock-bound harbor, with interesting colonial houses lining picturesque streets. *Salem* is of considerable historical and architectural interest, with fine mansions built by sea captains and merchants wealthy from trade with the Far East. On the waterfront is the Salem Maritime national historic site, including the old custom house, Derby wharf, main landing for the China traders, and the Derby house, a characteristic merchant's home. The Pioneer Village reproduces the very early New England colonial settlements. *Gloucester* and *Rockport* are summer resorts frequented by artists. Gloucester is a busy commercial fishing port and its fine harbor is a favorite with yachtsmen. *South Shore* suburbs are accessible by bus, and some by New York, New Haven & Hartford branch. *Quincy* was the home of the famous Adams family, preserved in the Adams Mansion national historic site. Summer resorts popular with yachtsmen include *Hingham, Cohasset* and *Scituate*. In *Plymouth*, first New England settlement, are several 17th century houses and storied Plymouth Rock. *Duxbury* has a tall Miles Standish monument (fine view of Plymouth bay and the south shore). North of Boston, beyond *Medford*, where visitors see Tufts College and several houses dating from the 17th and early 18th centuries, a Boston & Maine line runs through *Andover* (seat of Phillips Academy, boys' preparatory school, and Abbott Academy), and *Lawrence*, a mill town. Near Lawrence, but across the state line in New Hampshire, is the Rockingham Park race track. Buses and Boston & Maine trains connect Boston with Lexington and Concord, where visitors find many historic and literary shrines. At *Lexington* is preserved the green where the first fight of the Revolution occurred, April 19, 1775, between the Minute Men and the British redcoats whose coming was heralded by Paul Revere's ride. At *Concord* is the arch bridge where the "embattled farmers" fired the "shot heard round the world," turning back the British raid. Relics of colonial times and of the 19th century writers who lived in Concord are displayed in the Antiquarian house, and homes of Emerson, the Alcotts and Hawthorne are open to visitors. Walden Pond, made famous by Thoreau's classic journal, is just south of Concord and frequently is included in sightseeing itineraries. Suburban points west and south of Boston may be visited in a circuit tour by bus or motor; trains of the Boston & Albany serve *Wellesley*, reached via long-established fashionable residential suburbs—*Brookline; Chestnut Hill*, with Boston College in a sightly location; and widespread *Newton*. In addition to the landscaped grounds and art collections of Wellesley College, visitors to Wellesley see the Babson Institute. In *Dedham* is the 11-room frame Fairbanks house, (1636).

Canadian National

EASTERN CANADA is a mecca for thousands of winter sports devotees.

BRUNSWICK, Ga., is the gateway to the famed Sea Islands, including *Jekyll Island State Park*, with recreational facilities and a fine beach (boat from Brunswick), and St. Simon Island (9 miles, motor), on which are Fort Frederica National Monument (ruins of an 18th century British fortification) and *Sea Island*, a fashionable year-around resort, with a fine wide beach and outdoor sports facilities.

BRUNSWICK, Me., the seat of Bowdoin College, has interesting early 19th century homes, including one where Harriet Beecher Stowe is said to have written "Uncle Tom's Cabin." Quiet, charmingly situated summer resorts are on Harpswell Peninsula, Orrs Island and Bailey Island, lovely drives from Brunswick. From *Bath* (8 miles, bus) there is an attractive drive

TRAINS TO AND IN CANADA

Through trains or through cars from U. S. cities run direct to principal Canadian points. Major Canadian cities and resorts are connected by through trains.

HALIFAX has service (initiating line) from:
North Sydney (ferry from Newfoundland), St. John, Montreal, and Levis (ferry from Quebec) by Canadian National.
Yarmouth by Canadian National and Dominion Atlantic (C.P.R.)
Boston by Boston & Maine.

MONTREAL has service (initiating line) from:
Halifax, North Sydney (ferry from Newfoundland), Charlottetown, Metis Beach (summer week-ends), Portland (Me.), Niagara Falls, Jasper and Edmonton by Canadian National.
Washington, Baltimore and Philadelphia by Pennsylvania.
New York by New Haven and New York Central.
St. John, St. Andrews (summer), Regina, Calgary, Banff and Lake Louise by Canadian Pacific.
Boston by Boston & Maine.
Quebec, Toronto, Detroit, Winnipeg, Vancouver, Ottawa and Laurentian Mountain resorts by Canadian National and Canadian Pacific.
Chicago by Grand Trunk Western.
Buffalo, Rochester and Adirondacks gateways by New York Central.

TORONTO has service (initiating line) from:
Quebec, Montreal, Ottawa, Buffalo, Niagara Falls, Detroit, Muskoka Lakes area, Winnipeg and Vancouver by Canadian Pacific and Canadian National.
Philadelphia by the Reading.
New York by Lehigh Valley and New York Central.
Boston, Cleveland and Pittsburgh by New York Central.
Chicago by New York Central and Grand Trunk Western.
Regina, Calgary, Banff and Lake Louise by Canadian Pacific.
Edmonton and Jasper by Canadian National.

CANADIAN ROCKIES resorts have service (initiating line) from:
Toronto, Montreal, Winnipeg and Vancouver by Canadian National and Canadian Pacific.
Calgary and Regina by Canadian Pacific.
Edmonton by Canadian National.
Chicago (summer) by North Western.
Minneapolis-St. Paul (summer) by Soo Line.

VANCOUVER has through service (initiating line) from:
Montreal, Ottawa, Toronto and Winnipeg by Canadian Pacific and Canadian National.
Edmonton and Jasper by Canadian National.
Calgary, Regina, Banff and Lake Louise by Canadian Pacific.
Chicago (summer) by North Western.
Minneapolis-St. Paul (summer) by Soo Line.
Seattle by Great Northern and Canadian Pacific (steamer).
Victoria by Canadian Pacific steamer.

Charles E. Grover

COLORADO has wide, snowy spaces and cold, dry air for skiers.

Yale University News Bureau

CONNECTICUT welcomes visitors to historic houses and schools like Yale.

to *Popham Beach* (15 miles, motor) at the end of another peninsula, site of an early settlement and a popular summer cottage colony (splendid views). *Wiscasset*, 19 miles east of Brunswick (bus) has old houses built by sailing ship owners and captains (many can be seen on the mid-August Open House day). A side road leads south along another typical Maine coast peninsula to *Boothbay Harbor*, another charming resort where yachtsmen and fishermen congregate.

BRYCE CANYON NATIONAL PARK, Utah, is usually included with Zion and Grand Canyon National Parks in bus trips connecting with the Union Pacific at *Cedar City* (sleeper service in summer). It is a group of amphitheaters, walled in brilliant colors, partitioned by curtains, terraces and pinnacles of every shape and tint.

CAMDEN, S. C., settled before the Revolution, has been a winter resort for generations for people who prefer the autumn-like climate of the sand hills. The horse is king in Camden, and polo, drag hunts, steeplechases, flat races, and recreational riding on woodland trails keep many visitors outdoors in the season (December-April).

CANADA'S ROCKIES and Pacific coast area are a tremendous region of unsurpassed scenery, where Canadian National and Canadian Pacific trains almost always are in sight of magnificent mountains and appealing waters. *Victoria*, capital of British Columbia, charms visitors by its delightful gardens and wonderful scenic drives, and by its so-British aspect. *Vancouver* is surrounded by great natural beauty, and the wild country to the north affords fine fishing and hunting. Visitors particularly enjoy the vast national parks of the Canadian Rockies (season mid-June to mid-September), where luxurious accommodations, inviting trails and convenient bus schedules facilitate enjoyment of scenic beauty not surpassed in America. The Canadian National serves the area surrounding massive, aloof *Mt. Robson*, and the great pleasureland surrounding *Jasper*. The beauty of *Maligne Lake* and Mt. Edith Cavell are renowned, and trails lead to other sections of surpassing grandeur. Bus service connects Jasper with Lake Louise, passing the *Colum-*

TRAINS TO CHICAGO

Through trains or through cars operate from points in every state except five in New England, and also from important Canadian points. Chicago has service (initiating line) from:

Boston, Worcester, Springfield and Pittsfield by New York Central.

New York by New York Central, Erie, Lackawanna-Nickel Plate, Baltimore & Ohio, and Pennsylvania.

Poughkeepsie, Albany, Syracuse, Lake Placid, Rochester, Niagara Falls by New York Central.

Buffalo, Erie and Cleveland by New York Central and Nickel Plate.

Philadelphia, Baltimore, Washington and Pittsburgh by Pennsylvania and Baltimore & Ohio.

Wilmington, Del., by Baltimore & Ohio (also by Pennsylvania by connection at Philadelphia).

Pocono Mountains resorts and Delaware Water Gap by Lackawanna-Nickel Plate.

Williamsburg, Richmond, Charlottesville, Hot Springs, Va. (bus to Covington), White Sulphur Springs, Charleston, W. Va., and Huntington, by Chesapeake & Ohio.

Norfolk by Norfolk & Western and Chesapeake & Ohio (bus to Newport News).

Raleigh, Durham, Greensboro, Winston-Salem, Asheville, Charleston, S. C., Columbia and Lexington, Ky., by the Southern.

Atlanta by the Southern, the Louisville & Nashville and the Nashville, Chattanooga & St. Louis.

Jacksonville by the Atlantic Coast Line and Southern.

Miami, Hollywood, Fort Lauderdale, Boca Raton, Delray Beach, Lake Worth and West Palm Beach by the Florida East Coast and Seaboard Air Line.

Fort Myers, Sarasota, Bradenton, Tampa, St. Petersburg, Clearwater and Ocala by the Seaboard Air Line and Atlantic Coast Line.

Orlando, Lakeland, Gainesville and Thomasville by the Atlantic Coast Line.

St. Augustine, Titusville, Fort Pierce and Daytona Beach by the Florida East Coast.

Mobile, Montgomery, Nashville and Mississippi Gulf Coast resorts by the Louisville & Nashville.

Jackson, Miss., Memphis, and Champaign, Ill., by the Illinois Central.

New Orleans by the Illinois Central and Louisville & Nashville.

Chattanooga by the Nashville, Chattanooga & St. Louis and Southern.

Knoxville by the Louisville & Nashville and Southern.

Sandusky and Toledo by New York Central.

Columbus and Cincinnati by New York Central and Pennsylvania.

Akron and Youngstown by Erie and Baltimore & Ohio.

Louisville and Indianapolis by Monon, Pennsylvania and New York Central.

Evansville and Vincennes by Chicago & Eastern Illinois.

Detroit, Battle Creek and Lansing by New York Central and Grand Trunk Western.

Ann Arbor and Bay City by New York Central.

Mackinaw City, Petoskey and Traverse City by Pennsylvania (summer).

Grand Rapids by Chesapeake & Ohio.

South Bend by Grand Trunk Western, New York Central, and Chicago South Shore & South Bend.

Lafayette by the Monon and New York Central.

Fort Wayne by the Pennsylvania and Nickel Plate.

French Lick (bus to Orleans) by the Monon.

Springfield (Ill.) by the Gulf, Mobile & Ohio and Illinois Central.

St. Louis by the Gulf, Mobile & Ohio, Illinois Central and Wabash.

Milwaukee, Madison, Woodruff-Minocqua, Green Bay and Rapid City by the North Western and the Milwaukee.

Sault Ste. Marie by the Soo Line.

Duluth and Ashland by the Soo Line and North Western.

Ishpeming, Rochester and Rhinelander by the North Western.

St. Paul-Minneapolis by the Burlington, North Western, Soo Line and Milwaukee.

Peoria, Des Moines, Iowa City and Colorado Springs by the Rock Island.

Omaha by the North Western, Burlington, Rock Island and Milwaukee.

Lincoln by the Burlington and Rock Island.

Sioux City by the Milwaukee, North Western and Illinois Central.

Kansas City by the Santa Fe, Burlington, Rock Island and Milwaukee.

Topeka and Wichita by the Santa Fe and Rock Island.

Oklahoma City and Tulsa by the Santa Fe and Frisco.

Little Rock and Hot Springs, Ark., by the Rock Island and Missouri Pacific.

Houston, Galveston, Fort Worth, Dallas, Carlsbad, Lamy (bus from Santa Fe), Albuquerque, Grand Canyon, Bakersfield, Fresno and Merced by the Santa Fe.

El Paso, Tucson, Palm Springs and Reno by the Southern Pacific.

Phoenix and Berkeley by the Santa Fe and Southern Pacific.

Los Angeles by the Southern Pacific, Union Pacific and Santa Fe.

Las Vegas, Cedar City (summer, bus from Zion Park), Cheyenne, West Yellowstone (summer), Shoshone (bus from Sun Valley) and Boise by the Union Pacific.

San Francisco (Oakland) by the Southern Pacific, Santa Fe and Western Pacific.

Sacramento by the Southern Pacific and Western Pacific.

Salt Lake City by the Union Pacific and D. & R. G. W.

Denver by the Burlington, Union Pacific and Rock Island.

Portland (Ore.) by the Union Pacific and Spokane, Portland & Seattle.

Seattle and Spokane by the Great Northern, Milwaukee and Northern Pacific.

Tacoma and Three Forks (Yellowstone National Park in summer) by the Milwaukee.

Glacier Park and Grand Forks by the Great Northern.

Cody (Yellowstone National Park bus in summer) by the Burlington.

Livingston and Billings (both Yellowstone National Park by bus, in summer) by Northern Pacific.

Vancouver, Field, Lake Louise, Banff, Glacier and Calgary (all summer only) by the Canadian Pacific.

Toronto by the Canadian National and Canadian Pacific.

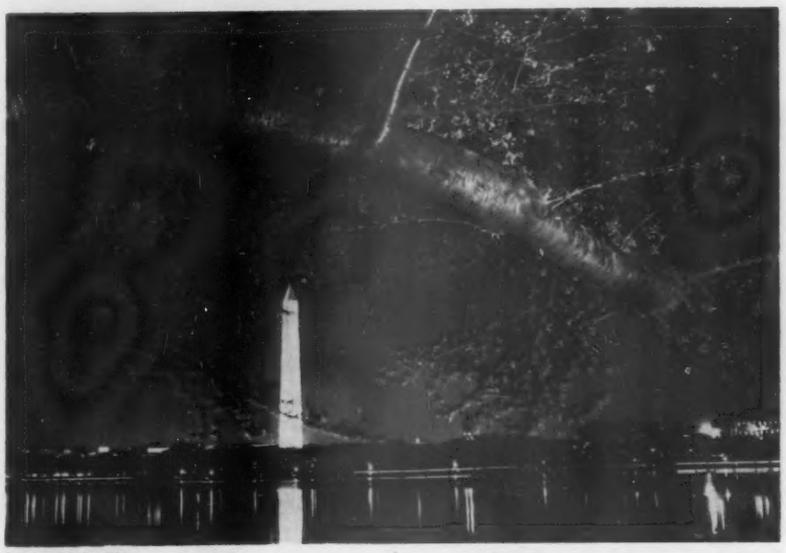
Montreal and Hamilton by the Canadian National.

bia Icefield, where visitors may ride icemobiles on the surface of a moving glacier. The Canadian Pacific serves *Golden,* gateway to the scenic valley of the upper Columbia river (excellent big game country), *Glacier,* station for Canada's Glacier National Park (wonderful forests, wildflowers, and ice-capped mountains) and *Field,* center for Yoho National Park's grand scenery, with bus service for *Emerald Lake,* the *Yoho Valley* and *Takakkaw Falls. Lake Louise* is world-renowned for its beauty, and the radiating roads and trails reach many vantage points. Bears, small animals and birds, and deer, elk and Rocky Mountain goats are seen in numbers. *Banff* has superb scenery, too, and recreation facilities, and has become a major center for winter sports, with a winter carnival and exhilarating skiing. *Waterton Lakes* National Park adjoins the U. S. Glacier National Park and shares its wonderful scenery and opportunities to study wildlife undisturbed. Lakes and waterfalls adorn the landscape throughout the area.

CAPE COD, Mass., is surrounded on all sides by water, giving it a delightful summer climate. Each village has old homes, frequently simple, plain structures of the so-called Cape Cod style, but occasionally the larger, more ostentatious mansion of the ship owner or sea captain. Boating, sailing and fishing have thousands of devotees. The ocean side of the cape has high sand dunes, windswept moors, and picturesque lighthouses. There are sheltered bathing beaches, charming gardens, and antique and curio shops. The business center of the cape is *Hyannis,* itself a resort and the station for many others reached by bus. *Woods Hole,* also a rail terminus, is the steamer port for Nantucket and Marthas Vineyard (see below). Here Nobska light has a superb view of Vineyard Sound and the south shore of the cape. *Falmouth* has numerous hotels and hundreds of summer homes. *Craigville Beach* is popular with bathers. *Chatham* has a sheltered harbor for boats, a lighthouse high on a bluff, a pleasant beach, and miles of roads passing charming cottages. Nauset beach, in *Eastham,* is overlooked by Nauset light. Near the tip of the cape is *Truro,* where the ocean side is a high bluff, skirted at the base by the great outer beach, sheltered from the winds but pounded by the Atlantic surf. On the bluff is famous Highland light. *Provincetown,* at the end of the cape, is frequented by artists. A historical museum, an art exhibit, a yacht club, and drives around the outer dunes appeal to strangers. The Pilgrim monument commands a wide view of the cape and the Massachusetts south shore across the bay. *Dennis* has a noteworthy summer playhouse. Like *Yarmouth,* it is on the bay side of the cape, where tidal marshes stretch between quaint harbors. *Sandwich* is a gateway to the cape; like other bayside villages, it has lovely elms and attractive homes.

Delaware State Development Department

DELAWARE beaches, like Rehobeth, have many visitors from nearby cities.



Baltimore & Ohio

WASHINGTON, D. C., is renowned for magnificent buildings in a spacious, verdant setting.

Florida State Advertising Commission

FLORIDA attractions include sponge fishing fleets as well as popular beaches.

Union Pacific

MT. RAINIER is one of the largest national parks and has outstanding scenery.

Idaho Department of Highways

IDAHO mountains are a vast wilderness area; above is Lake Coeur d'Alene.

CARLSBAD CAVERNS NATIONAL PARK, N. M., reached by bus from Carlsbad, also from El Paso, Tex., is the largest known cavern, consisting of immense chambers, fantastically embellished with stalactites, stalagmites and helictites of every size, shape and variety. The regular guided tour through an electrically lighted section of the cavern (only a fraction of the known extent) requires about four hours; there are shorter tours, and elevators minimize the climbing required.

CATSKILL MOUNTAINS resorts in New York have many hotels, camps, dude ranches and summer cottages, reached by bus or motor from New York, *Kingston* (ferry from Rhinebeck) or *Catskill* (bus from Hudson), both Hudson river ports. *Woodstock*, favorite spot of artists and actors, *Phoenicia*, surrounded by great peaks, *Pine Hill* (ski lift, winter sports facilities, fine view in summer), *Haines Falls*, *Hunter* and *Stamford* have accommodations for travelers and recreation facilities; all have scenic surroundings.

CEDAR BREAKS NATIONAL MONUMENT, visited in summer, is the nearest of the southern Utah wonderlands to Cedar City (bus tours connect with Union Pacific trains). Variations in dazzling color, changing by the hour, mark the sides of the fantastic formations and gigantic erosion-created amphitheater. There are wildflowers and birds in profusion.

CENTRAL FLORIDA RESORTS reach from Gainesville beyond Lake Wales. *Gainesville* is the seat of the University of Florida, with the state museum, large modern buildings, and a 27,000-seat stadium. *Ocala* has lake swimming and fresh water fishing. East 5 miles (bus, motor) is *Silver Springs*, with glass-bottom boats to see the marine growths and colorful fish in the sparkling clear water. *Leesburg* is a center for hunting (deer, quail) and bass fishing (bass tournament December-March). *Eustis*, which has similar attractions, has a winter trap shoot. *Orlando* is the chief city in the lake region, with an auditorium, tracks for dog racing and harness racing, botanical gardens and facilities for the usual outdoor sports. *Winter Haven* is a center for bass fishing and lake boating and bathing. There is a citrus exhibition (February), a festive occasion. The cypress gardens nearby (motor) have magnificent flower gardens (azaleas particularly) seen from boats plying winding canals. *Lakeland* has Florida Southern College in a semi-tropical setting. Boating and fishing (bass) are popular. *Lake Wales* has fine parks, playgrounds and facilities for sports. Mountain Lake bird and wildlife sanctuary (3 miles, motor) has the beautiful Bok Singing Tower, considered the finest carillon in America, in a setting of brilliant flowers, green lawns and forest trees.

Hedrich-Blessing from Illinois Division of Parks

ILLINOIS has many reminders of Lincoln, like reconstructed Salem village.

Indiana Dept. of Public Relations

INDIANA'S Rogers Clark memorial.

CHARLESTON, S. C., is proud of being peculiarly Southern, distinctive in its architecture and setting, and historically outstanding. In its environs are great plantations with magnificent gardens unsurpassed in America in the profusion and brilliance of their floral displays. The flowers are at their best between Christmas and mid-April, and most of the famous gardens encourage visitors only between December and May. (Camellias bloom December-March, azaleas March-April.) The old section of the city is compactly built at the end of a narrow peninsula between two broad rivers, and the Battery, a broad promenade at the very tip, lined with palmettos and lush flowering plants, commands a wide view across the harbor, encompassing historic Fort Moultrie and Fort Sumter and Castle Pinckney National Monument. The streets leading off the Battery are lined with old churches, pre-Revolutionary houses, some of them of mansion proportions and elegance, and high-walled gardens. Historic Charleston Foundation tours (late March, early April) permit visitors to see some of these homes and gardens, otherwise private, at height of the blooming season. Open all year are the Old Exchange (D.A.R. Museum), Heyward House (home of a Declaration signer who entertained Washington here), Dock Street Theater, Powder Magazine, Slave Market, and Huguenot and St. Philip's churches. Nearby are St. Michael's church, Gibbes art gallery, St. Mary's church, and the Joseph Manigault house. Visitors also can see the stately Miles Brewton house (headquarters of Cornwallis). Near Charleston, on the Atlantic, are Folly Beach (12 miles south, motor) and Isle of Palms (13 miles east, bus); both have amusements, bathhouses and superb wide, long, sandy beaches (season May-November). East of the city, along the ocean, are islands and marshes forming the Cape Romain National Wildlife Refuge (30 miles, motor) a haven for wild turkey, ducks, herons, egrets, cranes, and small animals. Nearby is Hampton plantation, with a Georgian mansion over two centuries old and gardens noted for camellias (47 miles, motor). Bus tours in the garden season take in the principal gardens where visitors are welcomed. These include *Magnolia* gardens on the Ashley river, world famous for camellias, azaleas, wistaria, roses; *Middleton* gardens, equally splendid and over two centuries old; *Mateeba* gardens, less formal, noted for dogwood and azaleas; and *Cypress* gardens, where the luxuriant bloom, shaded by huge cypress trees, is best seen by boat. There are other gardens too, also lovely if less renowned.

CHARLOTTESVILLE is the seat of the University of Virginia. The white-trimmed, red brick older buildings, in classic style designed by Jefferson, have set the pattern for newer structures to achieve a harmonious group. Near the city (motor) is Jefferson's mountain-top home, *Monticello*, a national shrine; beyond is *Ash Lawn*, home of President Monroe, with magnificent box hedges. In the vicinity are other fine southern homes over a century old, some of which visitors may see during the annual Garden Week (late April).

CHEBOYGAN, a commercial fishing center, is a Michigan resort and a winter sports center (skating rink, skiing, tobogganing). Deer hunters and bass and muskellunge fishermen flock here in season.

CHICAGO, the nation's greatest railroad center, is the major interchange point for travelers between the East and West, the Northwest and the South. Its important buildings, institutions and parks are of great interest. The Loop, or main downtown business section, is adjoined by a landscaped park stretching to Lake Michigan. Here are such buildings as the Public Library, Art Institute (paintings, prints, all the fine arts), Museum of Natural History (one of the world's finest), a great fountain, the aquarium (unsurpassed collections and arrangements), the planetarium, and Soldier Field, the great 105,000-seat stadium. The Tribune tower, across the Chicago river, has an observatory that looks over the whole sprawling city and its suburbs, and miles across Lake Michigan. On the north side, which is the fashionable residential section, is Lincoln Park, stretching along the lake; here are bathing beaches, yacht barbors, facilities for outdoor sports, a zoo, conservatory (seasonal flower shows), the Academy of Sciences (a museum of natural history), and the Museum of the Chicago Historical Society. Farther north is *Evan-*

COLORADO TRAIN SERVICE

Denver has through trains or through cars from Chicago, New York, St. Louis, Kansas City, California, Texas, and the Pacific Northwest. Connections at gateway cities provide fast service from other points. Principal through routes are:

Burlington-Denver & Rio Grande Western-Western Pacific through Chicago-San Francisco (Oakland) trains via Omaha, Lincoln, Salt Lake City and Sacramento, via Denver and Glenwood Springs, with through sleeper from New York (on alternate days by Pennsylvania via Philadelphia and by New York Central via Albany, Syracuse and Toledo). Other D.&R.G.W. Denver-Salt Lake City trains serve Colorado Springs, Pueblo and Glenwood Springs. Burlington lines (Colorado & Southern) trains run between Denver and Billings via Cheyenne, serving Boulder and Fort Collins, with connection from Cody (bus connection in summer from Yellowstone National Park) and connection at Billings from Glacier National Park (in summer). Burlington lines Denver-Dallas through trains via Fort Worth serve Pueblo and Colorado Springs.

The Union Pacific has through trains Cheyenne-St. Louis (by Wabash) via Kansas City, with through service from Los Angeles via Las Vegas and Salt Lake City; through service from San Francisco (Oakland) by Southern Pacific via Sacramento and Reno; and through service from Seattle via Portland (on-train transfer from Spokane and, in summer, West Yellowstone). There are North Western-Union Pacific through trains Chicago-Denver via Omaha.

Rock Island through trains between Chicago and Colorado, via Des Moines, Omaha and Lincoln, have through cars for both Denver and Colorado Springs.

Missouri Pacific St. Louis-Denver through trains via Kansas City serve Pueblo and Colorado Springs, with through Denver-Wichita sleeper.

The Santa Fe has through service between Kansas City and Denver, and between Denver and Los Angeles and Denver and Phoenix, both via Lamy (bus for Santa Fe) and Albuquerque, serving Colorado Springs and Pueblo.

ston, a residential suburb, seat of Northwestern University, with an imposing institute of technology and a 54,000-seat football stadium. Beyond Evanston are *Wilmette*, with the unusual Baha'i Temple; *Ravinia Park*, with a noted summer opera and music festival; *Fort Sheridan*, a large Army post; *Lake Forest*, seat of Lake Forest College; and *Great Lakes Naval Station*, the largest installation of its kind. All of these suburbs are reached by Northwestern suburban trains and Chicago North Shore & Milwaukee electric trains. South of Chicago's Loop and monumental lakefront buildings are Jackson Park (Japanese Gardens, museum of science and industry, lagoons, yacht harbors, recreation grounds) and the great quadrangles of the University of Chicago, with a fine Gothic chapel, carillon, and Oriental Institute with exceptional collections. Among residential suburbs west of Chicago is *Wheaton*, seat of Wheaton College. Beyond the city limits, in *Homewood*, a southern suburb, is Washington Park race track. Other tracks for thoroughbred racing are Arlington Park, at *Arlington Heights*, a northwest suburb, and Hawthorne, in *Cicero*, adjoining the city on the southwest.

CLEVELAND, lake port and industrial center, has spacious parks connected by landscaped parkways, fine museums (art, natural history) and an impressive civic center (auditorium, stadium, library, municipal buildings, horticultural garden). Western Reserve and John Carroll universities, Fenn College and Case Institute of Technology are leading schools. The Cleveland Orchestra and Western Reserve Historical Society (museum) are nationally known. *Oberlin* (35 miles, bus) is the seat of venerable Oberlin College. From *Sandusky* (60 miles, New York Central train or bus) visitors reach *Lakeside* (bus), home of a popular summer chautauqua, and *Put-in-Bay* (boat) and adjacent Lake Erie islands, frequented in summer for water sports (August regatta), agreeable climate and scenic and historic interest (national monument to Commodore Perry).

COLORADO SPRINGS, Colo., is a residential city and health resort at the base of Pikes Peak. Sightseeing facilities are well organized, with buses to many points nearby. *Broadmoor* is a year-round resort, offering varied outdoor sports in magnificent surroundings; there is a fine zoo. The *Cheyenne Canyons* have waterfalls (Seven Falls) and colorful rock formations. The *Garden of the Gods*, with spires, domes, pyramids, columns and every variety of rock formation, is the scene of an Easter sunrise service. Just beyond is *Manitou Springs*, with a group of mineral springs with varied properties. At Manitou Springs roads diverge to several points of interest. Cave of the Winds, reached by a scenic drive, has exceptional colors and striking formations. Gold Camp road follows the very scenic roadbed of the abandoned Cripple Creek Short Line railroad to Cripple Creek, a historic mining town now almost deserted. The Mt. Manitou scenic incline is a cable railroad to a summit commanding a wide view. Also in Manitou Springs is the base station of the Manitou & Pikes Peak cog railroad, which in summer conveys travelers to the summit of that renowned and mighty mountain, elevation 14,110 ft. Beyond Manitou Springs the Pikes Peak toll highway begins (motor from Colorado Springs, 30 miles to summit); this trip affords great views (summer only). An automobile race to the summit (Labor Day) attracts throngs. Part way up the slope is Glen Cove, a winter sports center with toboggan and ski runs (tows).

CORPUS CHRISTI, Texas, is a year-around seaside resort, with a curving shore lined with bathhouses, restaurants, tourist lodgings and hotels, amusements and piers. Duck hunting and fishing (surf and deep sea) are highly regarded. Buccaneer Days (early June) attract visitors.

CRATER LAKE (a national park in Oregon), intensely blue and very deep, is six miles across. A 35-mile drive (bus or motor) around the lake takes in the principal viewpoints and remarkable formations. In the park there are 200 species of wildflowers, many fine stands of evergreens, and a great variety of birds and small animals. The park museum has a wildflower garden and geological exhibit. Rim Village, with the principal accommodations, has bus service in summer from Southern Pacific stations at Medford, Grants Pass and Klamath Falls.

DEATH VALLEY NATIONAL MONUMENT, in California, is an isolated 2,981-sq. mi. section, with brilliantly colorful desert and mountain scenery, distinctive flora and geological formations, and a warm, sunny, equable and very dry winter climate. The heart of the area is a narrow valley, some 130 miles long, much of which is below sea level. Summer temperatures on the valley floor may exceed 125 deg., hence the season for travel is November to May. The principal gateway is Las Vegas, Nev., whence all-expense motor tours reach such places as Furnace Creek Ranch, Death Valley Scotty's "castle," and Dante's View, a mountain lookout where one can see both the lowest and the highest points in the U. S.

DENVER, magnificently situated at the edge of the great plains and the base of the Rocky Mountains, is Colorado's capital. In landscaped grounds near the Capital are the U. S. Mint; the State Museum, which has collections in history and ethnology, especially of Pueblo Indians; and the City-County Building. City Park has a zoo, gardens and lakes, some remarkable fountains, and a museum of natural history. Washington Park has noteworthy gardens and Lakeside Park has amusements. Denver is the chief gateway to the vast Rocky Mountain resort area of Colorado, with its summer and winter playgrounds. Sightseeing buses or automobiles reach fine scenery

TRAINS TO FLORIDA

Resorts on both coasts of Florida, and inland points also, have through train or through car service from most major cities east of the Mississippi. Additional service is provided in the winter travel season. Connections at New Orleans, St. Louis, Chicago, Washington or New York afford fast service from other points. By change at Jacksonville, or car to car en route, convenient service frequently is available where direct origin-to-destination cars are not provided.

Florida cities have service by:

Pennsylvania-Richmond Fredericksburg & Potomac-Atlantic Coast Line-Florida East Coast between New York and Miami, via Philadelphia, Wilmington, Baltimore, Washington, Richmond, Charleston and Savannah, serving Jacksonville, St. Augustine and East Coast resorts between Daytona Beach and Miami. Through sleepers in winter Boston-Miami (by the New Haven via Providence and New Haven). P.R.R.-R.F. & P.-A.C.L. through trains between New York and Jacksonville, via same route, provide through service between northern points and Sarasota, serving Orlando, Lakeland, Tampa and Bradenton; between northern points and St. Petersburg, serving Gainesville, Ocala, Leesburg, Tarpon Springs, Dunedin and Clearwater; and between northern points and Fort Myers.

Atlantic Coast Line-Florida East Coast through trains between Chicago and Miami (serving St. Augustine and East Coast resorts) take diverse routes: (1) by the Illinois Central, via Birmingham and Jacksonville, with through cars St. Louis-Miami, and through cars in winter Chicago-St. Petersburg (serving Clearwater) and Chicago-Sarasota (serving Tampa and Bradenton); (2) by Chicago & Eastern Illinois-Louisville & Nashville-Nashville, Chattanooga & St. Louis-Central of Georgia, via Nashville, Chattanooga, Atlanta and Jacksonville; (3) by Pennsylvania-Louisville & Nashville, via Indianapolis, Louisville, Nashville, Birmingham and Thomasville; and (4) by Pennsylvania-L. & N.-N.C. & St. L.-C. of Ga. via Louisville, Nashville and Atlanta (service between Chicago and Jacksonville, connecting for Florida East Coast points). A.C.L.-C. of Ga.-L. & N.-P.R.R. service between Chicago and West Coast resorts, with through sleepers Detroit-St. Petersburg (by Baltimore & Ohio) is via Cincinnati, Knoxville and Atlanta, serving Tarpon Springs, Clearwater and St. Petersburg and Tampa, Bradenton and Sarasota.

Seaboard Air Line-R.F. & P.-P.R.R. through trains between New York and Miami, via Philadelphia, Wilmington, Baltimore, Washington, Richmond, Raleigh, Southern Pines, Camden, Columbia, Savannah and Jacksonville, with through sleepers in winter Boston-Miami (by New Haven via Providence, and New Haven), serve Ocala, Winter Haven, Lake Wales, West Palm Beach, Fort Lauderdale and Hollywood. S.A.L.-R.F. & P.-P.R.R. through service between northern points and West Coast resorts to Tampa, Clearwater and St. Petersburg, with through sleepers New York-Venice, serving Bradenton and Sarasota; New York-Boca Grande in winter. S.A.L.-L. & N. through service New Orleans-Jacksonville, via Mississippi Gulf Coast resorts and Mobile.

Florida East Coast-Southern-New York Central through service in winter between Detroit and Miami, via Cincinnati, Chattanooga, Atlanta and Jacksonville, with through sleepers Buffalo-Cleveland-Miami, serving East Coast resorts between Daytona Beach and Miami.

Frisco-Southern through trains between Kansas City and Jacksonville, via Memphis, Birmingham and Atlanta, with sleeper Kansas City-Miami (by Florida East Coast, serving St. Augustine and East Coast resorts).

The Southern has through trains between Asheville and Jacksonville, via Columbia, with Charlotte-Jacksonville sleeper.

and recreation points in the widespread *Denver Mountain Parks*. Very popular is a loop trip via *Golden*, home of Colorado School of Mines, and up hairpin curves to *Lookout Mountain* (spectacular view), with the grave of Buffalo Bill and relics of his time; the road follows the mountain crest through a game preserve (buffalo, elk, deer), continuing via Genesee Park and *Central City* (a mining camp of the sixties, now a "ghost town," with a restored opera house, scene of an annual drama and music festival in July). From *Idaho Springs*, a mining town with mineral springs and baths, the road climbs past campgrounds and recreational facilities. A side trip from Echo Lake is the 14-mile climb (summer only) to the top of Mount Evans (elevation 14,260 ft.), the highest U. S. automobile road. From Echo Lake the loop trip returns to Denver through Bergen Park and *Evergreen*, with a lakeside recreation center (boating, fishing, skating). *Boulder* (bus or Colorado & Southern train) is the seat of the University of Colorado, with a popular summer school and summer chautauqua and a crowd-drawing rodeo (late July). Winter sports areas near Denver, especially for skiing (tows), are Berthoud Pass (bus or motor) and Winter Park (bus, motor, or Denver & Rio Grande Western trains).

DETROIT, great lake port and manufacturing center, "capital" of the automobile industry, is a gateway to Canada and an important convention center. It is the seat of Wayne University and the University of Detroit. Among outstanding buildings are the Music Hall, home of the Detroit Symphony Orchestra; the world's largest Masonic Temple; a noted art museum; a historical museum; and the great public library, embellished with murals, mosaics and stained glass. Belle Isle, in the Detroit river, has facilities for outdoor sports, an aquarium, conservatory, music bowl, and miles of roads and woodland trails. Near suburban Royal Oak Detroit has one of the nation's largest zoos. The state fair (September) and thoroughbred horse racing (May and September) draw large attendance. West of Detroit is *Dearborn*, where Henry Ford founded the Edison Institute Museum, an immense collection of exhibits in technology and science, along with replicas of Independence Hall and other famous buildings. Adjoining is *Greenfield Village*, a collection of historic houses transferred from many places, including Edison's laboratory, Burbank's birthplace, the poet's village blacksmith shop, a Cotswold cottage and jeweler's shop from England and McGuffey's schoolhouse.

DURHAM, N. C., where the odor of tobacco fills the air, has immense factories making cigarettes and smoking tobacco. It is the seat of Duke University, which has women's college buildings in Georgian style and a men's college group of Collegiate Gothic buildings forming one of America's finest university plants. The magnificent chapel has a large carillon. The university gardens are attractive especially when the tulips, iris and daffodils are blooming. South of Durham (12 miles, bus) is *Chapel Hill*, seat of the University of North Carolina, which has beautiful grounds shaded by great old trees, an arboretum, a planetarium and a tall bell tower.

KIDC—Kansas

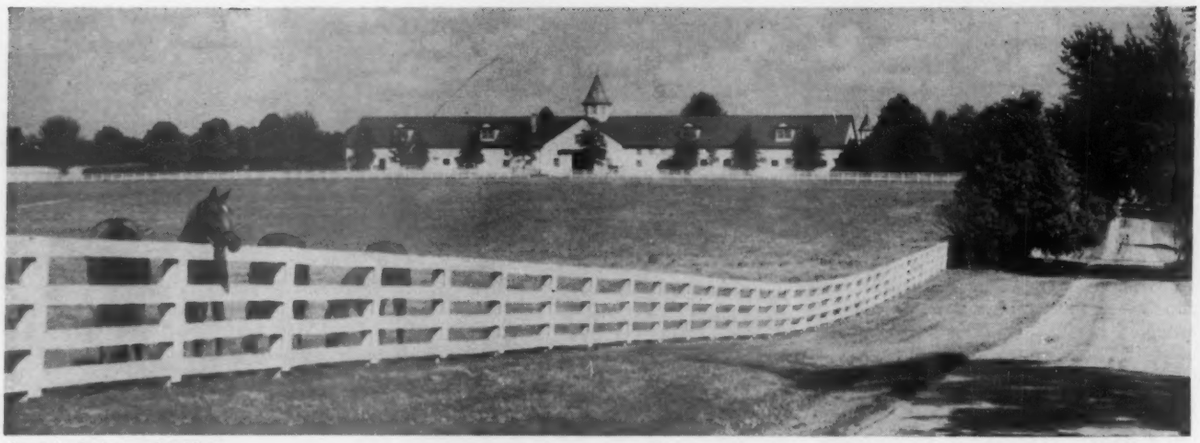
KANSAS wheat fields stretch to the horizon from railroads crossing the state.

Iowa State Conservation Commission

IOWA parks have recreation facilities attracting sportsmen and vacationers.

DYERSBURG, Tenn., is the gateway to *Reelfoot Lake* (25 miles, bus), a feeding stop on the great wild-fowl migratory route, and one of the Mississippi valley's favorite hunting and fishing areas (duck, small game, bass, catfish).

EAST COAST RESORTS of Florida between St. Augustine and Miami include Daytona Beach, New Smyrna



Kentucky Division of Publicity

KENTUCKY thoroughbreds and rolling bluegrass farmlands are the state's pride.

Missouri Resources Division

OUTDOOR SPORTS are enjoyed in every state by young and old.

Beach, Titusville, Cocoa, Melbourne, Vero Beach, Fort Pierce, Stuart, West Palm Beach, Palm Beach, Lake Worth, Delray Beach, Boca Raton, Fort Lauderdale, Dania and Hollywood. All have sports facilities, salt water fishing, boating, and wonderful ocean beaches, either in their limits or conveniently close. *Daytona Beach* and adjacent Ormond have fine winter homes, a boardwalk, fishing pier and amusement center. *Vero Beach* has the McKee Jungle Gardens, with orchids and other colorful and rare plants growing wild. *West Palm Beach, Palm Beach* and *Lake Worth,* adjacent communities, are popular winter resorts, and Palm Beach has a clientele of leaders in society and the arts, accommodated in great hotels and luxurious homes. The estates, parks and drives have magnificent palms, oleanders, hibiscus, bougainvillea and other showy plants. Yachting and boat racing are enthusiastically pursued, and there are facilities for the usual outdoor sports. There is a sailfish derby (January-February) for deep sea fishermen. *Boca Raton* has a large and fashionable hotel and beach club. *Fort Lauderdale* has miles of canals to accommodate boat owners, and there are regattas and fishing tournaments (sailfish rodeo, December-April). *Hollywood* has large hotels, a boardwalk, casino, and facilities for sports and fishing.

FRENCH LICK, Ind., all-year health resort and recreation center, has mineral springs and facilities for the usual outdoor sports.

GALVESTON, Tex., a busy commercial and fishing port on an island, has one of the finest beaches in America, running 30 miles along the Gulf of Mexico, with the usual seaside amusements, hotels, restaurants, and a pier for yachting, fishing, water sports, and recreation. There are deep sea fishing "rodeos" in summer, an oleander festival in the spring, and a popular Mardi Gras carnival. Streets are lined with bougainvillea, hibiscus, oleanders and other semitropical blooms.

GLACIER NATIONAL PARK, Mont., has a million acres of magnificent alpine scenery, blue-green lakes, precipitous mountains, glaciers, cascades, dense evergreen forests, myriad wildflowers. The season is May-October. Accessible by the Great Northern main line, the park is conveniently seen by buses, connecting with trains and operated on scheduled one-, two- and three-day tours, but its vast size and manifold attractions justify longer stays to enjoy boating, hiking, fishing, horseback trails and Indian ceremonies. National Park Service naturalists conduct tours to the accessible glaciers, for which the park area has no equal in the U. S. Adjoining Glacier Park on the north is *Waterton Lakes National Park,* in Alberta, with comparable scenery and accommodations, which is usually included in the three-day tours. All tours include the remarkable Goin-to-the-Sun highway, which connects the east and west sides of Glacier Park, crossing the continental divide; it affords superb views and opportunities to see big game (mountain goats, mountain sheep, bear, deer, bobcats, elk and moose) and gorgeous wildflower gardens (best in July). Waterton Lake, Swiftcurrent Lake, St. Mary Lake and Two Medicine Lake, all in scenic surroundings, have visitors' accommodations; they are centers for trail trips, boat rides, fishing excursions, and other recreation.

GLENWOOD SPRINGS, a year-round Colorado resort, has hot mineral springs and a large outdoor warm plunge. Hunting and fishing are excellent in the nearby White River National Forest, where there are scenic drives, lakes and waterfalls. Visitors enjoy winter sports.

GRAND CANYON NATIONAL PARK, in Arizona, includes one of the world's outstanding natural wonders, the mile-deep, 12-mile wide canyon of the Colorado river, unmatched for its immensity and its range of warm glowing colors. The south rim varies from pine forest to semidesert; the north rim is wooded with evergreens and aspen, where deer, birds and small game congregate; the bottom of the canyon (mule trail) is almost tropical in climate, though vegetation is sparse. Accommodations at Grand Canyon village on the south rim (Santa Fe trains, bus, motor) and Grand Canyon Lodge on the north rim (motor, bus in conjunction with Union Pacific trains via Zion National Park). North rim sightseeing buses reach various viewpoints, including Point Imperial, highest spot on either rim. South rim bus trips reach a group of spectacular observation points.

GREAT SMOKY MOUNTAINS NATIONAL PARK is entered either

Massachusetts Development Commission

MASSACHUSETTS is rich in historic and scenic places.

Union Pacific

WINTER SPORTS bring many visitors to Sun Valley.

from the North Carolina (see Asheville) or Tennessee sides. This most visited of the national parks includes ranges of wooded, haze-veiled high mountains over 5,000 feet in elevation, cascades, cool streams and hidden valleys. In spring the floral display includes wildflowers (March-April), dogwood (April), mountain laurel (May, June), flame azalea and purple rhododendron (June) and the white rhododendron (July). In the fall the turning hardwood foliage carpets the mountainsides in brilliant colors. Trout fishing is good. Bears and other animals (all protected) are frequently seen. The park is threaded by hundreds of miles of trails for horseback riders and hikers. Knoxville-Asheville buses cross the park on regular schedule by the Newfound Gap highway, from which a park road follows the divide south 6 miles to Clingmans Dome, a bald summit commanding an immenseiy broad view of mountains and valleys.

GREEN MOUNTAINS ranges stretch the length of Vermont from border to border, making practically the whole state a summer resort. *Newport,* on long, beautiful Lake Memphremagog, is a gateway to Canada (bass, lake trout, salmon). *Stowe,* at the base of Mt. Mansfield, has snow from November through April, and facilities for skiing (lifts, tows, jumps) and other winter sports are elaborate and well patronized. A road leads to the summit of *Mt. Mansfield,* highest point in Vermont (superb view). *Burlington* looks across Lake Champlain to New York's tumbled Adirondack peaks. There are facilities for swimming, boating and outdoor sports, and the long, cold winters favor skating, skiing and other winter sports. *Montpelier* is the state capital. *Northfield,* seat of Norwich University, has a winter carnival, but continues to cater to summer visitors, too. *Middlebury* is both a summer and winter resort. Middlebury College has a winter carnival, a renowned summer foreign languages school and, at Bread Loaf Mountain (12 miles east), a highly rated writers conference and summer school in English. Chipman hill, near Middlebury, has ski jump, ski slopes and slalom courses. *Lake Dunmore* provides swimming, fishing and boating. Fishing is popular, too, at *Lake Bomoseen* (bass, perch, pike); there are many summer homes on the lake and nearby. *Rutland* is the gateway to the Green Mountains National Forest and to the Pico ski area (9 miles, bus). *Woodstock* has many summer visitors, and its winter sports facilities attract expert skiers (jump, tows). *White River Junction* is the gateway to resorts in the Connecticut valley in both Vermont and New Hampshire. Scenic *Windsor,* on the Connecticut, is at the base of Mt. Ascutney; there is a road to the summit, and the view of valleys and mountain ranges is superb. *Brattleboro,* on the Connecticut, has championship skiing facilities. *Manchester* is a fashionable summer resort in delightfully scenic surroundings, and its winter sports facilities (tow, slopes, slalom courses) are among the best. Mt. Equinox, overlooking the town, is climbed by an automobile road; the view is wonderful. *Bennington,* and adjoining North Bennington, seat of Bennington College, are historic towns in a scenic setting near the southern end of the Green Mountains. The 300-foot battle monument overlooks delightful country, particularly beautiful in autumn.

HANOVER, N. H., on the Connecticut River, is the seat of Dartmouth College; fine buildings include the historic Row, facing the green, the great Baker library (colonial brick, with Orozco murals), school of business administration, and new residence halls. The Dartmouth Outing Club maintains winter sports facilities, especially for skiing (tows), and sponsors a famous winter carnival (February).

HOT SPRINGS, Ark. (Hot Springs National Park), is an all-year health resort, with large hotels, elaborate bathhouses and shops and amusements for tourists, tucked in ravines between Ouachita Mountain ridges. There are 47 hot mineral springs, and the use of the waters is carefully supervised. The national park has miles of well-kept trails in the wooded hills. Fishing is good in the back country and in Lake Catherine (7 miles, motor). Fast horses compete for the stakes at Oak Lawn track. The Ouachita National Forest, north and west of Hot Springs, has accessible recreation grounds.

HOT SPRINGS, Va., a magnificently situated health and pleasure

TRAINS TO AND IN NEW ENGLAND

Through trains or through cars from many eastern cities of the U. S. and Canada run to Boston, serving intermediate New England cities. Within the six New England states there is fast intrastate and intercity service by the New England railroads.

BOSTON has service (initiating line) from:

Halifax by Canadian National.

St. John and Toronto by Canadian Pacific.

Montreal by Canadian Pacific and Canadian National.

New York, New Haven, Hartford, Providence and Cape Cod by the New Haven.

Nantucket and Marthas Vineyard by steamer connecting with New Haven trains at Woods Hole or New Bedford.

White Mountain points, Portland (Me.), Portsmouth, Concord and Connecticut valley points by the Boston & Maine.

Bangor, Brunswick (Me.), Augusta, Ellsworth (summer; bus from Bar Harbor), and Rockland by Maine Central.

Van Buren by Bangor & Aroostook.

Chicago, St. Louis, Indianapolis, Cincinnati, Cleveland, Detroit, Buffalo, Rochester, Syracuse, Albany, Springfield and Worcester by the New York Central.

Berkshires points by the Boston & Maine and New York Central.

Pittsburgh by New York Central and Pennsylvania.

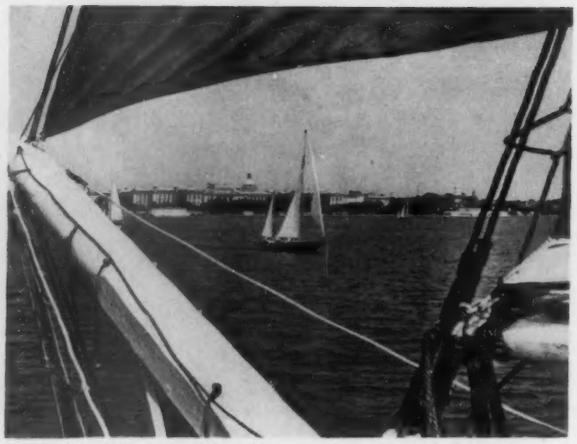
Washington, Baltimore and Philadelphia by the Pennsylvania.

Green Mountains points by the Rutland and Central Vermont.

Florida East Coast points (winter) via the Carolinas by Atlantic Coast Line and Seaboard Air Line.

Maine Publicity Bureau

MAINE has rolling hills admirable for outdoor life.



Maryland Department of Information

MARYLAND visitors love Chesapeake inlets and estuaries.

resort, is in a high valley between Allegheny Mountain ridges, with facilities for outdoor sports and miles of trails and woodland roads.

ITHACA, N. Y., has a scenic situation overlooking Cayuga lake. Cornell University campus is expectionally beautiful, "high above Cayuga's waters." Noteworthy among the buildings are the library (clock tower), law school, student union, and the Collegiate Gothic dormitories and war memorial. The campus is bisected by a deep gorge through which a lively stream leaps and cascades down to the lake. Boating, bathing and fishing are enjoyed on the lake. North 8 miles (motor) is *Taughannock Falls* State Park, with a bathing beach, boat livery and sports facilities, and a walk along a deep glen to the falls, a 215-foot vertical drop. On the edge of Ithaca is Buttermilk Falls State Park, where a creek drops hundreds of feet in a series of falls and cascades. Robert H. Treman State Park (5 miles, motor) has a scenic gorge through which a stream tumbles for miles in a dozen cascades and rapids; bathing and hiking are enjoyed. *Watkins Glen* (28 miles, motor) is a state reservation where a creek drops precipitately through a deep ravine, creating remarkable rock formations and dozens of waterfalls, pools and rapids. Watkins Glen is on Seneca lake, with boating, bathing and other water sports.

KANSAS CITY, Mo., is an industrial and commercial center. Among important buildings are the skyscraper city hall, 423 ft. tall, which has an observatory overlooking a vast area of river valleys and prairies; a large auditorium, popular for conventions and exhibitions; and the Nelson art gallery, with one of the nation's superior collections of paintings and fine arts. The Liberty Memorial, opposite the monumental Union Station, has a war museum and a memorial shaft, topped by an observatory. The University of Kansas City has a handsomely landscaped suburban campus. On the south side of the city is a notable system of boulevards and parkways, connecting with immense Swope Park (zoo, lake, and all outdoor sports). Adjacent to Kansas City, Mo., and largely across the Kansas river from its larger neighbor, is *Kansas City, Kan.*, with many of the industries upon which the Missouri city's prosperity depends, including the stockyards.

KENNEBUNKPORT, Me., is a resort beloved by artists and writers, especially for its rocky shores, warped wharves and charming houses. *Ogunquit,* 10 miles south (bus), also has an art colony. There is a sandy bathing beach and a long stretch of scenic rocky shores.

LAKE WINNEPESAUKEE, in the White Mountains foothills of New Hampshire, attracts thousands of vacationers by its beauty and recreation facilities. There are many islands, charming coves and harbors, and dozens of resorts. Hundreds of motor boats and sailing vessels ply its waters, and regular boat service is maintained between the principal landings, including *Wolfeboro, Meredith* and *The Weirs. Squam Lake* and *Lake Winnisquam* have comparable attractions and facilities. Visitors to the area enjoy swimming, fishing (salmon, bass), autumn foliage, and winter sports. *Belknap Mountain,* overlooking Winnepesaukee, has ski trails (lift, tows) and championship ski jumps. The lift runs in summer, too, for visitors who are thrilled by the great view from the summit. *Laconia* is the gateway to this area.

LASSEN VOLCANIC NATIONAL PARK, in California near the junction of the Sierra Nevada and Cascade ranges, contains the only recently active volcano in the U. S. It may be reached (bus or motor) from Chico, Red Bluff or Redding, all on the Southern Pacific's Oakland-Portland main line. (Season, May-September.) A highway partly encircles the peak, making it convenient to enter on one side and leave on the other. Trout fishing is good in the park's streams and lakes, and winter sports facilities are under development.

LAS VEGAS, Nev., garish and glittering, has a scenic location, but most visitors seek its gambling halls and night clubs, frequented by Hollywood "commuters." The year's gala event is Helldorado week (mid-May), with parades, pageants, rodeo and "wild west" performances. Las Vegas is the chief gateway to Death Valley National Monument, in California, and to *Hoover Dam,* near *Boulder City* (bus or motor; 23 miles: often very hot in summer). The dam, the highest on earth, converts the Colorado river into the largest artifical lake; its power plant supplies half the electric current used in southern California. Bordering Lake Mead, the reservoir, is a national recreation area, with facilities for boating, swimming, bass fishing and other sports.

LONG BRANCH, the largest of the North Jersey coast resorts, has amusements, theaters, hotels, shops, piers, boardwalk, wide beach and saltwater pools. To the south and north are similar beach towns, forming an almost continuous community stretching along the ocean from Highlands to Seaside Heights, 40 miles. *Asbury Park,* 6 miles south, is the most important of these resorts. Inland 2 miles from Long Branch (bus, motor) is Monmouth race track. *Red Bank,* 6 miles north (bus, frequent local trains by Central of New Jersey and Pennsylvania) is a center for Navesink River resorts, where sailing, yachting and fishing attract many summer visitors. There is an annual speedboat regatta (late August). The Shrewsbury river,

Minnesota Development Department

MINNESOTA lakes and woodlands charm city dwellers.

Missouri Resources Division

MIDWESTERN states visitors enjoy every water sport.

nearer Long Branch, is similarly popular for water sports and boating of all kinds. *Sandy Hook*, near Highlands is swept by ocean breezes.

LOS ANGELES is a city of tremendous distances and traffic congestion. Out-of-doors life is customary all year, and the entertainment of tourists at all seasons is an important industry. In the nearby mountains are scenic drives, resorts and lakes, while the adjacent shore of the Pacific is lined with beach settlements. Sightseeing tours are well organized, or visitors may use local transit and bus lines or drive-yourself cars. Points of interest are so grouped that visitors may see (1) downtown; (2) Griffith Park and north side; (3) Hollywood; (4) Glendale and San Fernando; (5) Pasadena and San Marino; (6) Santa Monica; and (7) Long Beach; and combinations can be worked out. *Hollywood* has big radio studios, hotels, theaters, restaurants and shops, but most of the movie business is in nearby suburbs. Homes of the movie stars, seen on a sightseeing bus trip, are in Beverly Hills, Westwood, Brentwood, Malibu, and in the surrounding open country. Hollywood Bowl, a 20,000-seat amphitheater, has concerts and a famous Easter sunrise service. Westwood has the great campus of the University of California at Los Angeles with large modern buildings. Adjoining *Beverly Hills* is Will Rogers State Park, including his home. In *Glendale* is the extraordinary Forest Lawn Memorial Park, with reproductions of noteworthy literary shrines. *San Fernando* stages a fiesta in June, and its restored Spanish mission, with an interesting garden, is visited at all seasons. *Pasadena* is a winter resort with spacious homes and lovely gardens. The Rose Bowl, a stadium seating 99,000, is the scene of the New Year's Day football classic, a part of the festivities associated with the annual Tournament of Roses. *San Marino*, a suburb of Pasadena, has the Huntington Library and Art Gallery, with one of America's finest collections of manuscripts and rare books and priceless paintings and art treasures. The surrounding grounds are a superb botanical garden. *San Gabriel*, nearby, has the San Gabriel mission, one of the best preserved of the early Spanish missions of California, *Arcadia*, also a Pasadena suburb, has the famous *Santa Anita* track, where the country's fastest horses race (January-February). Farther inland are *Pomona*—scene of the Los Angeles County Fair (September), comparable in size and attendance to the biggest state fairs—and *Claremont*, with Pomona College (remarkable Orozco frescoes), Claremont College, and associated institutions. Los Angeles beach suburbs are in two groups: one stretches between Redondo Beach and Santa Monica, the other between Long Beach and Laguna Beach. All have bathing facilities, seaside amusements, surf and off-shore fishing, and the sunshine and balmy climate for which Southern California is famous. Beyond *Santa Monica* is *Malibu Beach*, with splendid "cottages." *Long Beach* has a mile-long amusement zone, a wide beach, an immense pier with a large convention hall, and a great salt-water plunge for those who avoid the surf. Boating, yachting and surf and deep sea fishing are popular at Long Beach and especially at *Newport Beach*. *Laguna Beach* has comparable shore attractions and in addition a large artists' colony. Inland from Long Beach is *Whittier*, seat of Whittier College and of the hacienda (partly restored) of Pio Pico, a Mexican governor of California. Offshore is *Santa Catalina Island* (boat from Wilmington, adjoining Long Beach, to Avalon), another popular resort, swept by ocean breezes and commanding wonderful marine views. There are fine beaches for swimming, a great casino, glass-bottom boats to see marine gardens, cruisers to visit the seal rocks or go deep sea fishing, and buses to the bird park.

MACKINAW CITY, Mich., at the northern end of the lower peninsula, is the terminal of the ferry for the upper peninsula and the Soo, and for *Mackinac Island*. The island, at the head of Lake Huron, is a summer resort and convention center (no automobiles). Visitors enjoy boating, the usual outdoor sports, and the old fur trading post and historic fort, now a museum.

MARITIME PROVINCES of Canada, and the Gaspé peninsula, have wonderful scenery and a cool summer climate to complement varied facilities for recreation and challenging hunting

TRAINS TO NEW ORLEANS

Through trains or through cars are operated to New Orleans from California, Kansas City, Chicago, St. Louis, Jacksonville, Washington, New York, and principal cities in the Middle West and South. Principal through routes are:

Illinois Central from Chicago via Memphis and Jackson, with through cars St. Louis-New Orleans.

Kansas City Southern from Kansas City via Joplin and Baton Rouge (bus connection Baton Rouge-Natchez).

Louisville & Nashville-Western of Alabama-Atlanta & West Point-Southern-Pennsylvania through trains between New York and New Orleans, via Philadelphia, Wilmington, Baltimore, Washington, Charlottesville, Charlotte, Atlanta, Mobile and Mississippi Gulf Coast resorts. L. & N. through trains between Cincinnati and New Orleans, via Louisville, Cave City, Nashville, Birmingham, Mobile and Mississippi Gulf Coast resorts, also Chicago-New Orleans (by C. & E. I.). Through sleeper Pittsburgh-New Orleans by Pennsylvania-L. & N. L. & N.-Seaboard Air Line through trains between Jacksonville and New Orleans via Tallahassee, Pensacola, Mobile and Mississippi Gulf Coast.

Southern-Norfolk & Western-Pennsylvania through trains between New York and New Orleans via Philadelphia, Wilmington, Baltimore, Washington, Knoxville, Chattanooga and Birmingham.

Texas & Pacific through trains between Fort Worth and New Orleans, via Shreveport and Dallas, with sleepers New Orleans-Little Rock (by Missouri Pacific).

Missouri Pacific lines through trains between Houston and New Orleans, via Baton Rouge, with through sleeper San Francisco (Oakland)-New Orleans (by Santa Fe, via Berkeley, Merced, Fresno).

Southern Pacific lines through trains between Los Angeles and New Orleans, via Palm Springs, Phoenix, Tucson, El Paso, San Antonio and Houston, with sleepers Galveston-New Orleans.

Missouri Resources Division

MISSOURI reminds the visitor to Hannibal of an American classic.

Great Northern

MONTANA landscapes are decorative.

and fishing regions. New Brunswick's *Restigouche, Miramichi, Tobique* and *Nipisiguit* rivers are as renowed for salmon fishing as the small streams are for trout and the lakes for bass and togue. Hunters find bear and deer in the woods, grouse, woodcock and duck in the marshes and thickets. *Fredericton, Newcastle* and *Campbellton* are sportsmen's gateways. St. *Andrews* (golf, boating, summer estates) is a favorite resort, Surf-girt, mountainous Gaspé (politically part of Quebec), reaching into the sea between the St. Lawrence and Chaleur bay, has a magnificently scenic circumferential drive ("package" bus tours), reaching its climax at *Percé*. The Cascapedia and other Gaspé rivers are famous salmon streams. *Prince Edward Island* has delightful beaches, reached from *Charlottetown*. Nova Scotia's shore is fringed with bays that delight the yachtsman, into which trout-filled streams flow from lakes where bass lurk. Tuna tournaments, off *Yarmouth, Liverpool* or *Halifax,* attract experts. *Digby* is convenient for *Bay of Fundy* resorts. *Annapolis Valley* apple blossoms are renowned (festival in *Kentville,* early June). *Pictou's* situation is admirable. *Cape Breton Island,* explored from *Sydney* or *Ingonish,* has charming scenes of lakes, rugged cliffs and inviting coves.

MESA VERDE NATIONAL PARK, in southwestern Colorado, includes the largest and best preserved of all known cliff dwellings, homes of prehistoric Indians. Rangers conduct visitors through the ruins during the season (May-October). The park is reached by motor or bus (50 miles) from *Durango,* gateway to the magnificently scenic but largely inaccessible San Juan National Forest.

MIAMI and MIAMI BEACH form the country's foremost winter resort, to which many summer vacationers come also. There are hundreds of hotels and apartment houses, many open all year, and miles of streets are lined with winter homes. Fine shops and night clubs serve winter visitors. Horse racing is continuous through the winter (at Hialeah, Tropical and Gulfstream parks) as is greyhound racing. Sports events include intersectional football in the 60,000-seat Orange Bowl (New Years), sailing regattas (March, April) and the Royal Poinciana Festival (June). Jai-alai is played through the winter by professionals. Fishing is good all year (tuna, marlin, sailfish, bonito) and there are fishing tournaments winter and summer. South of Miami (45 miles, bus) is *Everglades National Park,* a vast area of tropical swamps and mangrove forests, unlike any other portion of the U. S. There are many kinds of palms and semi-tropical trees and plants, and birds and fish not found farther north. *Key West* (157 miles, bus) at the end of a string of causeway-connected coral keys, has a delightful winter climate.

MINNEAPOLIS and ST. PAUL, on opposite sides of the Mississippi river, form the *Twin Cities,* the chief industrial and banking center of the Northwest. In Minneapolis the park system, connected by a circumferential drive (sightseeing bus trips) provides complete recreational facilities, including boating, bathing and canoeing in summer and iceboating and skating in winter on its 22 lakes. Minnehaha Park has the small falls of that name, made famous by Longfellow. The Foshay tower, 475 ft. tall, has an observatory commanding a wide view. Historic Fort Snelling has a museum of Indian and pioneer days. The University of Minnesota, one of America's largest, has a vast campus spreading from the Mississippi's banks. West of Minneapolis (bus, 18 miles) is *Lake Minnetonka,* famed in song, with residential villages and facilities for water sports. *St. Paul,* the state capital, also has a fine system of boulevards and parkways (bus). Recreational facilities are varied and highly developed. Cold-weather activities are climaxed by a Winter Carnival (end of January). The state fair (late August) is the big event of the summer. Public buildings include the handsome Capitol, the adjacent Minnesota Historical Society (library and museum, emphasizing settlement of the Northwest), and the striking modern city hall and courthouse.

MISSISSIPPI PLAYGROUNDS extend 48 miles along sheltered Mississippi sound from Bay St. Louis to Pascagoula. Sport fishing is superior all along this shore; sea trout, mackerel, tarpon, redfish, pompano and other varieties tempt the salt water fisherman, while the streams flowing down to the sound have bass, trout, bream, croakers and other varieties to test the angler's skill. Marshlands provide duck hunting and quail are found on the grassy ridges. *Bay St. Louis* is a quiet resort where yachts and fishing boats tie up. From *Pass Christian* a scenic gulf-side parkway, shaded by moss-draped live oaks, leads east along a seawall to Ocean Springs. A July 4th regatta and the Gulf Coast Pageant (March) entertain visitors who come to Pass Christian for fishing, sailing, bathing and other outdoor sports. *Gulfport* is the metropolis of the district; it is both a commercial port and a resort (Northerners come in winter, Southerners in summer). *Edgewater Park* has facilities for boating, fishing, swimming and other outdoor activities. *Beauvoir* is the modest, galleried, ante bellum house which was the last home of Jefferson Davis, maintained as a Confederate shrine. *Biloxi* is a busy shrimp port, and a year-round pleasure resort, beautified by oleanders, hibiscus, magnolias, azaleas and other brilliantly blooming

Edholm & Blomgren

NEBRASKA'S capitol is at Lincoln.

Union Pacific

NEVADA offers visitors to Las Vegas gay night life and legal gambling.

plantings. There is a sports carnival and regatta in July, but sailing, golf, tennis and other sports are enjoyed the year round. The blessing of the shrimp fleet (second Sunday in August) is a colorful occasion. *Pascagoula* is a shipbuilding town, but summer visitors find the fishing good.

MOBILE, Ala., is a port and industrial center of growing importance, but still retains enough of the characteristics of the Old South to appeal to strangers. In the older residential sections there are still interesting ironwork-trimmed balconies on spacious houses on live-oak shaded streets. The mild climate encourages a lush growth of flowers and shrubs, and the azalea season (February-March) brings many visitors to see the spectacular display. An Azalea Trail, a 17-mile drive in an amazing profusion of the brilliant blossoms, has been mapped for travelers. Southwest of Mobile (22 miles, motor) are the *Bellingrath Gardens*, open all year, where visitors see in season camellias, azaleas, dogwood, mountain laurel, spiraea, hydrangea, gardenias, crepe myrtle, oleander, hibiscus and other flamboyant growths, sheltered by live oaks draped with Spanish moss. Mobile's Mardi Gras is a gala festival preceding Lent. Deep sea fishing in Mobile bay and the Gulf of Mexico and fresh water fishing in the bayous of the Mobile delta contribute to the enjoyment of visitors.

MONTEREY, the Mexican capital of California, has a beautiful location on Monterey Bay. The adjoining peninsula is a popular all-year resort section. Surf and deep sea fishing attract sportsmen, and the city has important commercial fisheries. The historic buildings are reached by a well-marked walking tour. At *Del Monte*, adjoining Monterey on the east, is the post-graduate school of the U. S. Navy, in forested grounds with complete outdoor sports facilities. West of Monterey, beyond the Stanford University marine station (aquarium) is *Pacific Grove*, with a marine museum, a warm salt water plunge, and marine gardens seen from glass-bottom boats. From Pacific Grove the famous 17-mile drive runs along the rocky, irregular shore of the Pacific to Carmel, with exciting views, including much-pictured gale-gnarled Monterey cypress trees, sea lion colonies off shore, and superb golf courses

TRAINS TO NEW YORK

Through trains or through cars are operated direct to New York from all important cities east of the Mississippi, from Texas and California cities, and in season from the principal resorts from New England to Florida. By connection at St. Louis, Chicago or Montreal practically all other points have fast train service to New York. There is direct service to New York (initiating carrier) from:

Montreal and Toronto by Canadian National and Canadian Pacific.

Providence, New Haven, Hartford, Springfield Mass.), the Berkshires and Cape Cod (summer; steamer connection from Nantucket and Marthas Vineyard) by the New Haven.

Boston by the New Haven and New York Central.

Long Island points by the Long Island.

Portland (Me.), Concord (N. H.), White Mountains points (summer) and the Connecticut Valley by Boston & Maine.

Ellsworth (bus from Bar Harbor), Rockland, Bangor and Brunswick (Me.), all summer only, by Maine Central.

Buffalo by the Lehigh Valley, Lackawanna and New York Central.

Lake George and Lake Champlain points and Saratoga Springs by the Delaware & Hudson.

Green Mountains points by the Rutland and Central Vermont.

Atlantic City and Princeton by the Pennsylvania.

Long Branch and Asbury Park by the Central of New Jersey and Pennsylvania.

Philadelphia by the Reading, Baltimore & Ohio and Pennsylvania.

Pocono Mountain resorts by the Lackawanna.

Ithaca by the Lehigh Valley.

Lakewood by the Central of New Jersey.

Detroit, Toledo, Columbus and Indianapolis by the New York Central and Pennsylvania.

Cleveland by the New York Central, Nickel Plate, Erie and Pennsylvania.

Chicago by the Pennsylvania, Baltimore & Ohio, Nickel Plate, Erie, and New York Central.

Washington, Baltimore and Wilmington (Del.) by the Pennsylvania and Baltimore & Ohio.

Akron by the Erie, Baltimore & Ohio and Pennsylvania.

Syracuse by the Lackawanna and New York Central.

Niagara Falls by the New York Central and Lehigh Valley.

Adirondacks and Thousand Islands resorts, Worcester, Rochester, Albany and the Catskills by New York Central.

Norfolk by Norfolk & Western and Pennsylvania (ferry to Cape Charles).

New Orleans and Memphis by the Southern and Louisville & Nashville.

Birmingham by the Southern, Seaboard Air Line and Louisville & Nashville.

Mobile, Mississippi Gulf Coast and Nashville by Louisville & Nashville.

Atlanta and Raleigh by Seaboard Air Line and Southern.

Asheville, Durham, Aiken, Charlotte, Columbia, Chattanooga and Knoxville by the Southern.

Pinehurst by the Seaboard Air Line.

Miami, West Palm Beach and intermediate Florida East Coast resorts by the Seaboard Air Line and Florida East Coast.

St. Augustine, Daytona Beach and Titusville by the Florida East Coast.

Fort Myers, Sarasota, Bradenton, Tampa, St. Petersburg, Clearwater, Ocala, Jacksonville and Savannah by the Atlantic Coast Line and Seaboard Air Line.

Orlando, Lakeland, Gainesville, Charleston (S.C.) and Wilmington (N.C.) by the Atlantic Coast Line.

Hot Springs (Va.), White Sulphur Springs, Charleston (W. Va.) and Huntington by the Chesapeake & Ohio.

Louisville by the Chesapeake & Ohio, Louisville & Nashville and Baltimore & Ohio.

Richmond by the Richmond, Fredericksburg & Potomac.

San Francisco (Oakland) by the Southern Pacific and Western Pacific.

Los Angeles by the Santa Fe and Union Pacific.

Las Vegas by the Union Pacific.

Salt Lake City by the D. & R.G.W. and Union Pacific.

Denver by the D. & R.G.W.

Albuquerque, Santa Fe (bus to Lamy), and Kansas City by the Santa Fe.

El Paso and Fort Worth by the Texas & Pacific.

Houston and Little Rock by the Missouri Pacific lines.

San Antonio by the Missouri-Kansas-Texas and Missouri Pacific lines.

Dallas by the Texas & Pacific and Missouri-Kansas-Texas.

Besh from State Development Commission

NEW HAMPSHIRE winter sports facilities are highly developed.

State Department of Conservation

NEW JERSEY treasures colonial relics.

Southern Pacific

NEW MEXICO'S Carlsbad Cavern, world's greatest, is a national park.

NYSPIX-Commerce

NEW YORK'S Statue of Liberty welcomes voyagers to America.

State Conservation Department

NORTH CAROLINA tobacco fields interest visitors to this scenic state.

and beaches. *Carmel* is an artists' colony and shore resort. Visitors come to the San Carlos Borromeo mission, burial place of Padre Serra. Beyond is scenic Point Lobos, a rugged promontory with surf fishing, hiking and windworn cypress, and a wild, rugged coast stretches far southward.

MT. RAINIER NATIONAL PARK, in Washington, dominated by the glacier-capped cone of 14,408-ft. Mt. Rainier, is a year-round playground in the Cascade range. The principal accommodations are at Longmire and Paradise Valley, both reached by daily bus from Tacoma and Seattle. Trout fishing, hiking, riding and mountain climbing are the chief diversions in summer (no hunting). The park is a popular winter sports center, with skiing December through April (600-inch snowfall). Other attractions are waterfalls, lakes, gorges and cliffs, dense forests, wildlife (including mountain goats), and magnificent wildflower gardens forming a 50-mile belt around the mountain.

NANTUCKET and MARTHAS VINEYARD, Mass., reached by steamer from Woods Hole or New Bedford, are island resorts off Cape Cod with an exceptional summer climate, and consequently have continued for years to attract vacationers. Both islands have bathing beaches, sheltered harbors for yachtsmen, fine seafood, good fishing, facilities for sports, and interesting old homes. *Edgartown* on Marthas Vineyard and *Nantucket* town sent many vessels to sea in whaling days, and the profits of those voyages were invested in fine houses. Nantucket's *Siasconset* is loved by artists; its Sankaty light has a romantic setting.

NATCHEZ, Miss., is off the main lines of travel, but hundreds come to the quiet city each spring when the gardens bloom to see the historical pageants and the magnificent old Southern homes opened to visitors during the annual Natchez pilgrimage (March). The spring flowers are at their best then, but at least a dozen of the finest mansions are open the year round. Buses connect with trains at Vicksburg, Jackson or Baton Rouge.

NEW ORLEANS has an individuality that makes it one of the most interesting cities in America. Summers are hot and humid, and winter dampness is sometime penetrating, but the climate has not prevented New Orleans from becoming a great city and port, with diversified industries. The great event of the year is the carnival week ending with Mardi Gras, a fiesta unequalled in the U.S. for Latin gayety and spectacular display. Sightseeing buses and sightseeing boats run on regular schedules, but the French quarter Vieux Carré, to most strangers the most interesting part of the city, is best seen on foot. The newer (American) city and the French quarter are divided by Canal street. The center of the Vieux Carré is Jackson square. The surrounding narrow streets and narrower alleys are lined with old-worldish houses, many with overhanging balconies of elaborate ironwork. The Ursuline convent, the French market, the

customs house, the Pontalba apartments and Madam John's Legacy are among the places pointed out to tourists. In the French quarter, too, are numerous restaurants renowned for their French and Creole cooking. The newer American city has fine residential sections, particularly in the neighborhood of Tulane University and adjacent Audubon Park section. North of the business section, toward Lake Pontchartrain, is City Park, with recreational facilities, an art museum and magnificent trees. The Fair Grounds track is popular for horse racing (winter); there is a sports carnival (late December), a horse show (late April) and a sailing regatta (August). Along the Mississippi levees and delta bayous, reached by road or boat, are lovely plantation homes, many dating from pre-Civil War days, characterized by tall columns, long galleries, and large grounds shaded by immense live oaks.

NEW YORK is visited each year by millions attracted by its theaters, night life, great stores, cultural advantages, contests and spectacles, and incomparable buildings. Sightseeing tours include many points of interest, and most places are conveniently reached by subway. In *lower Manhattan* are the Empire State building (world's tallest structure; observation platform); Theodore Roosevelt's birthplace; Chinatown; Greenwich Village; the City Hall; St. Paul's and Trinity churches, on lower Broadway; the Stock Exchange, surrounded by the great skyscrapers of the financial district; the old Subtreasury (historical exhibits); and Battery Park, with piers where boats depart for tours around Manhattan and for the Statue of Liberty, on an island in the harbor. The harbor traffic, with tugboats, ferries, warships, tramp vessels and great liners, is remarkable. In the *midtown section* are the great hotels, railroad and bus terminals, the buildings of the United Nations, the Metropolitan Opera, Times Square, the Public Library, Morgan Library (illuminated manuscripts, works of art), St. Patrick's cathedral, St. Thomas church (magnificently embellished), Madison Square Garden, Carnegie Hall, the Museum of Modern Art, and Rockefeller Center (guided tours include 70th floor observatory, rooftop gardens, radio studios, Music Hall, plaza and arcades). Central Park divides the *uptown section*. On the east side (fashionable residences) are the impressive Temple Emanu-el (synagogue), the Frick galleries (old masters) and the Metropolitan Museum of Art (outstanding in America in completeness and range of collections). On the west side (great apartment houses) are the American Museum of Natural History, planetarium, New York Historical Society, Catheural of St. John the Divine (incomplete, but magnificent portions are open), Columbia University, Riverside church (fine stained glass, world's largest carillon), Grant's tomb, Museum of the American Indian, City College of New York, and the Cloisters (medieval ecclesiastical art and architecture, famous tapestries, and a splendid view of the Hudson). In the *Bronx* are New York University, Hunter College, Fordham University, New York Botanical Garden (formal plantings, conservatories, arboretum), and the world's largest zoo. In *Brooklyn* are the U.S. Navy Yard, St. John's University, Brooklyn College, Brooklyn Polytechnic Institute, great Prospect Park (another large zoo, gardens, historic houses, recreation grounds, walks and drives), the Brooklyn Botanic Gardens (special rose, iris, wildflower, rock and water gardens), the Brooklyn Museum of Arts and Sciences and the Academy of Music. Also part of Brooklyn is *Coney Island* (subway or sightseeing bus), with 5 miles of wide beach, boardwalk and carnival-type amusements, terrifically crowded on summer week-ends. Brooklyn is on *Long Island*, which extends east 125 miles to Montauk Point. Besides many fine estates and residential suburbs (served by Long Island trains) there are several state parks on the island, and sheltered bays harbor thousands of yachts and small boats. Along the Atlantic are miles of sand beaches, of which *Jones Beach* (bus from Wantagh station on the Long Island) is accessible and popular (surf or lagoon swimming). *Long Beach* is a large shore resort and residential city; *Southampton* is a center of fashionable cottages and estates; *Montauk* has a yacht harbor, and fishermen hire boats to go to sea for tuna, swordfish, sea bass and weakfish. Across the Hudson from New York in New Jersey (ferry) is *Hoboken*, seat of Stevens Institute of Technology. North of New York (local New Haven and New York Central trains) is Westchester County, with suburban homes and splendid country estates. New York has sporting events and spectacles the year round, including big league baseball, professional football, thoroughbred racing at Belmont Park, Jamaica and Aqueduct tracks, and many contests and spectacles at Madison Square Garden.

NIAGARA FALLS, one of the world's great natural wonders, attracts three million visitors yearly. Cities of that name in New York and Ontario stretch along the river. The falls is divided by Goat Island, reached by a bridge crossing the rushing stream just above the American falls. From the island there are close views of the brink of both the American and the horseshoe or Canadian falls, which has a greater volume. An elevator takes visitors to the base of the American falls. The best view of the falls, either by daylight or the night time electrical illumination, is from a landscaped park on the Canadian side. The gorge downstream is crossed by bridges and by a cable car at Whirlpool rapids; sightseeing buses follow the rim. Niagara University is at Niagara Falls. At *Youngstown*, 12 miles north (bus), is restored historic Fort Niagara, established in 1726.

NORFOLK, Va., shares with PORTSMOUTH and NEWPORT NEWS one of the world's finest harbors. *Ocean View* (bus 8 miles) has a bathing beach and the usual seashore amusements. Fishermen take off here for fine fishing in Chesapeake bay and

NORTHWESTERN STATES TRAIN SERVICE

The Twin Cities, Montana and Wyoming Rockies and Pacific Northwest have through trains from Chicago and through cars or trains from San Francisco (Oakland), Denver and Kansas City. Connections at major gateways afford convenient service from other major cities.

Service is provided by:

The Burlington between Chicago and St. Paul-Minneapolis.

Burlington-Great Northern between Chicago and Seattle, via Fargo, Glacier Park and Spokane, with through cars Chicago-Portland, Ore. (by Spokane, Portland & Seattle), serving St. Paul and Minneapolis. The Great Northern has St. Paul-Minneapolis-Winnipeg through trains.

Burlington-Northern Pacific between Chicago and Seattle, via Fargo, Billings, Livingston and Spokane, with through cars Chicago-Portland, Ore. (by Spokane, Portland & Seattle), and through cars Cody-Chicago and Livingston-Chicago in summer (bus connections for Yellowstone National Park), serving St. Paul and Minneapolis. The Northern Pacific has St. Paul-Minneapolis-Winnipeg through trains.

The Soo Line-Canadian Pacific route between St. Paul-Minneapolis and Winnipeg and, in summer, between St. Paul-Minneapolis and Vancouver, B. C., via Calgary, Banff, Lake Louise and Field in the Canadian Rockies (in winter train between St. Paul-Minneapolis and Moose Jaw, Sask., connects with C. P. R. east-west transcontinental trains). Summer Pullman service through between Chicago and Vancouver (by Chicago & North Western via Milwaukee). Other Soo Line trains between Minneapolis-St. Paul and Chicago (sleeper Duluth-Chicago) and Minneapolis-St. Paul and Sault Ste. Marie. Connection at Sault Ste. Marie with Canadian Pacific through cars Sault Ste. Marie-Toronto, which connect at Sudbury with Montreal trains.

Pool service between Duluth and St. Paul-Minneapolis by the Soo Line, Great Northern and Northern Pacific.

The Duluth, South Shore & Atlantic has sleepers three days weekly between Duluth-Superior and Ishpeming and Marquette.

Rock Island through trains between Minneapolis-St. Paul and Houston run via Des Moines, Excelsior Springs, Kansas City, Topeka, Fort Worth and Dallas, with through sleepers between Minneapolis-St. Paul and Los Angeles via El Paso, Tucson and Phoenix. Rock Island-Burlington trains operate between Minneapolis-St. Paul and St. Louis.

The Milwaukee has through trains between Chicago and St. Paul-Minneapolis via Milwaukee and via Madison, also through trains between Chicago and Seattle-Tacoma via Milwaukee, Three Forks (bus for Yellowstone National Park in summer) and Spokane.

The Chicago & Northern Western system has through trains between Chicago and St. Paul-Minneapolis via Milwaukee and via Madison, also through trains between Minneapolis-St. Paul and Omaha, with through sleepers between Minneapolis St. Paul and Los Angeles (by Union Pacific) via Cheyenne, Salt Lake City and Las Vegas. Other through trains between Chicago and Rapid City (bus for Black Hills points) via Milwaukee, and between Chicago and Duluth via Madison.

Great Northern trains run between Seattle and Vancouver.

Union Pacific-Great Northern-Northern Pacific joint service with fast trains between Seattle and Portland, serving Tacoma, with through sleepers Chicago-Seattle by Union Pacific-North Western, via Omaha, Cheyenne and Portland; St. Louis-Seattle by Union Pacific-Wabash, via Kansas City and Denver; and San Francisco (Oakland)-Seattle by Southern Pacific. U.P. trains Spokane-Portland

Spokane, Portland & Seattle trains Portland-Spokane.

Greater North Dakota Association

NORTH DAKOTA grain fields are evidence of the fertility of the great plains.

the Atlantic. Norfolk's municipal gardens, where azaleas, rhododendron, iris, laurel, roses and other showy flowers bloom between lagoons and evergreens, bordered by dogwood, are exceptional (best season, March-June). *Cape Henry* (18 miles, bus), a headland at the mouth of Chesapeake bay, has a famous lighthouse. A wonderful beach, backed by sand dunes, extends south for many miles, and at *Virginia Beach* (19 miles direct from Norfolk, bus) is one of the South's most popular summer resorts (season May-October), with a long boardwalk, shops and amusements, sports facilities, hotels and apartments, a casino, and surf fishing and bathing. South of Portsmouth (20 miles, motor or boat) is the wild *Dismal Swamp*, noted for fishing (pike, perch) and hunting (deer, bear, small game). South of Norfolk (85 miles, bus), in North Carolina, is *Nags Head*, a shore resort on a long sandbar separating the Atlantic and Albemarle sound. Kill Devil Hill National Memorial commemorates the Wright brothers' first flight. Sandy islands stretch on south beyond Cape Hatteras, a remote windswept region appealing to fishermen (channel bass) and bird lovers.

NORTH WOODS RESORTS of Minnesota dot an immense area between Duluth and Fargo, N.D. Among them are *Bemidji, Park Rapids, Ely, Detroit Lakes*, scene of a water carnival each July, *Grand Rapids, Cass Lake, International Falls*, gateway to the Rainy Lake district of Ontario, *Tower*, on Vermilion Lake, and *Walker*, on an arm of Leech Lake, near the Shingokee Winter Playground, a skiing resort in the *Chippewa National Forest.*

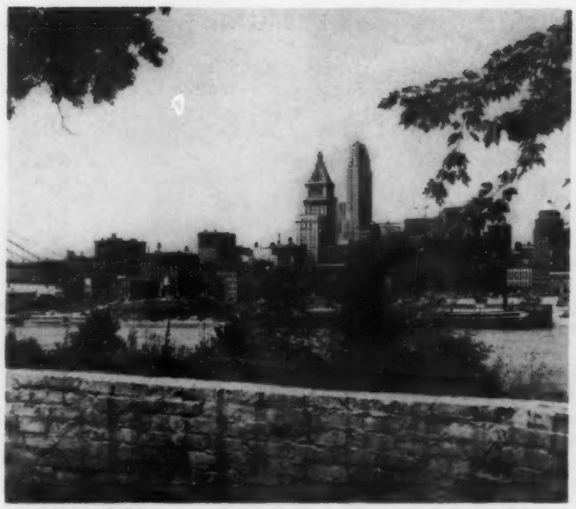
OLYMPIC NATIONAL PARK, in Washington, a remote, very rainy, forested area, preserves the finest uncut Pacific-slope rain forest (spruce, Douglas fir, hemlock), which surrounds rugged, inaccessible, glacier-clad Mt. Olympus. Wildlife protected in the park includes elk, blacktail deer, Rocky Mountain goats, cougars, bears and small animals and birds in great variety. Trout fishing is attractive. There are few roads but over 500 miles of trails make the area accessible by horseback or hiking. A highway, which makes a loop around the park, is accessible from Seattle (by boat), Tacoma or Olympia.

ONTARIO'S tremendous area includes big cities and hundred-mile stretches of empty forest and lake country. *Toronto*, busy industrial center, is the chief gateway to the popular resort area of eastern Ontario, while *Fort William* and *Port Arthur* are convenient to the great area of woods and water north and west of Lake Superior. *Ottawa*, capital of the Dominion, has the government buildings and fine parks, and the nearby *Rideau Lakes* (south) and *Maniwaki* country (north) appeal to fishermen. Toronto, capital of the province, has the great annual Canadian National Exposition (late August). Ontario shares the *Thousand Islands* and *Niagara Falls* with New York. North of Toronto is a delightful lake resort country, including the *Kawartha Lakes* (approached through *Peterboro*), *Lake Simcoe* (approached through *Barrie* or *Orillia*), the *Muskoka Lakes district*, including enticing *Lake of Bays*, with *Algonquin National Park* beyond (all entered via *Huntsville* or *Bracebridge*), and *Lake Nipissing* and the *French River* and *Timagami Forest* area (reached through *North Bay*). *Georgian Bay* islands and shore resorts are accessible from *Midland*. In western Ontario, sportsmen and vacationers flock to *Lake of the Woods* (entered by *Kenora*), *Minaki, Sioux Lookout, Lake Nipigon* and *Quetico Provincial Park*. Canoes reach wild northern areas.

OZARK RESORTS are scattered through southwestern Missouri and adjacent Arkansas; most patronized are the Lake of the Ozarks and Lake Taneycomo sections. *Lake of the Ozarks State Park* is a large reservation at the east end of this vast winding reservoir. It has sandy beaches, sailing and boating and other water sports, fishing (bass, salmon, panfish) and quail hunting. This area is served by Missouri Pacific buses running between Jefferson City and Lebanon and Springfield, the latter two points being on the Frisco St. Louis-Oklahoma City main line. *Lake Taneycomo* has well developed recreation facilities, including hunting, fishing, swimming, boating, riding, tennis and golf. The float trips on the White river and others of the region are novel means to see interesting scenery and seek the haunts of bass, catfish, blue gills and other fish. This area is conveniently entered at Branson and Hollister, adjoining towns at the Missouri Pacific's Lake Taneycomo crossing. In Arkansas *Eureka Springs* is a health resort with mineral springs, built on steep mountain slopes.

PALM SPRINGS, a desert oasis near the base of massive Mt. San Jacinto, is a favorite California resort of Hollywood stars and headline personalities. There are numerous hotels and dude ranches, pools for midwinter swimming, palm-filled canyons for riding and driving, and warm, dry air and brilliant sunshine. Summers are very hot.

PHILADELPHIA is a center of unrivaled historic interest and the home of noteworthy cultural activities. Its suburbs include places of outstanding beauty. Sightseeing bus tours take in most places of interest. The heart of the business section is the massive City Hall, with a tall tower, topped by a



Chesapeake & Ohio

OHIO cities like Cincinnati are important travel gateways.

State Planning & Resources Board

OKLAHOMA visitors flock to the Will Rogers memorial.

statue of William Penn, a landmark for miles around. Toward the Delaware from City Hall is Independence Hall, where the Declaration of Independence was signed. The Liberty Bell is displayed there. Close by are the Old Customhouse national historic site (a noteworthy example of classic architecture), Carpenters Hall (meeting place of the first Continental Congress), quaint Betsy Ross house (where the first U. S. flag supposedly was made), Christ Church (where Washington and other Revolutionary leaders worshipped), Benjamin Franklin's grave, and St. George's (Methodist), St. Joseph's (Catholic) and Old Swedes churches, all pre-Revolutionary. North of City Hall are the Academy of Fine Arts (American portraits and paintings), Temple University, the U. S. Mint, and Girard College. South are the Historical Society of Pennsylvania (portraits, manuscripts), the Academy of Music (home of the famous Philadelphia orchestra), and, much farther, League Island park (99,000-seat Municipal Stadium, scene of Army-Navy football games; and the American Swedish Historical Museum), and the U. S. Navy shipyard. Across the Schuylkill from City Hall are the buildings of the University of Pennsylvania (with a botanical garden, an outstanding museum of archaeology, and Franklin Field, a 78,000-seat stadium; football, relays). In the University vicinity are the Commercial Museum, scene of trade shows and exhibitions, the city's great Convention Hall, and Drexel Institute (art exhibits). City Hall and Fairmount Park are connected by a broad parkway, on which face the Academy of Natural Sciences (great collections in all branches of natural history), the Franklin Institute (an immense museum of technology and science, with fascinating working displays), the planetarium, Rodin museum, Free Library, Philadelphia Museum of Art (beautiful building, one of America's finest collections of paintings, antiques, and all the fine arts; period rooms; landscaped surroundings), and a large aquarium. Fairmount Park, one of America's finest, extends miles along the Schuylkill and the narrow winding ravine of its tributary, Wissahickon creek. In the park are the Philadelphia zoo, the "dell" (summer symphony concerts), a horticultural museum, and half a dozen fine and historic homes of the colonial and federal periods, appropriately furnished. *Germantown*, the city's northwest section, has interesting pre-Revolutionary houses, an arboretum, and the 36,000-seat stadium of Temple University. The annual Mummers Parade (New Years) is the year's big festivity. *Camden*, N. J., across the Delaware (bus, ferry, subway) is an industrial city; Garden State race track is nearby. North of Philadelphia are residential suburbs (reached by Reading local trains or bus), including *Jenkintown*, seat of Beaver College, *Bryn Athyn*, with the handsome Gothic cathedral of the Swedenborgians, and *Doylestown*, with the Bucks County Historical Society's large collection of pioneer relics. By-roads in this area reach delightful old stone Quaker meetinghouses. West of Philadelphia are other lovely suburbs, including *Swarthmore* (bus), seat of Swarthmore College, and *Rose Valley*, with a notable theater. The "main line" suburbs (Pennsylvania local trains), surrounded by beautiful estates, include three college towns, *Haverford*, *Bryn Mawr* and *Villanova*. This area is traversed by bus tours to *Valley Forge* State Park (also accessible by Reading and Pennsylvania local trains). Visitors to this historic shrine see Washington's headquarters, a memorial chapel, and markers and monuments commemorating Revolutionary soldiers. The dogwood display here (late April) is unsurpassed.

PHOENIX, Ariz., is the state capital and business center and a winter vacation resort, located in the irrigated Salt River Valley amid palms, gardens and year-round crops. The Arizona Capitol is in a landscaped park. Nearby is the Arizona Museum, with exhibits dealing with the Indians of the Southwest. South of the city (7 miles; bus or motor) is immense South Mountain Park, where roads and trails thread through growths of shrubs, trees and cacti. A popular drive from Phoenix, the Apache trail, (bus or motor) leads east into the mountains via Papago Park, with a notable desert botanical garden. Beyond are *Tempe*, seat of Arizona State College, and *Mesa*, where the Mormon temple is admired. Ahead is Superstition Mountain, famous in prospectors' lore. The road continues into the mountains to Roosevelt Dam, where the desert-girt reservoir affords fishing and boating, and on to *Globe*, a copper-mining center (Southern Pacific train connects to through trains at Bowie).

PINEHURST and SOUTHERN PINES are North Carolina winter resorts in the sand hill country, with large hotels and many homes and cottages. The winter climate is cool and bracing, encouraging golf (6 courses), polo, horseback riding, steeplechasing, drag hunts, quail and small game shooting, and other outdoor activities. The holly plantings at Pinehurst are noteworthy. There are frequent golf tournaments and horse shows.

POCONO MOUNTAINS are a scenic highland section of Pennsylvania's woods and waters with well-developed resort facilities, popular for the spectacular laurel display (June), skiing and other winter sports, and for golf, riding, lake swimming and boating, fishing and other activities in clear mountain air. Resorts include Split

Rock, Mount Pocono, Buck Hill Falls, Skytop, Cresco, Canadensis and Pocono Summit.

PORTLAND, Maine's chief city, is attractively situated on island-dotted Casco bay. Visitors seek the Wadsworth house, early home of the poet Longfellow (interesting antique furnishings). Boats ply between the waterfront and Casco Bay islands, providing pleasant summer outings. Back of Portland is a wonderful lake region, with fine fishing (trout, bass, salmon) and picturesque settings for summer homes. *Sebago Lake* (21 miles, motor) is the largest; *Naples* (30 miles, bus) is on Long Lake, connected with Sebago by the Songo river. Sebago Lake State Park has swimming, hiking, boating, horseback riding and other outdoor activities.

PORTLAND, Ore., is known for its roses, seen in almost every dooryard and park. The Rose Festival in June rivals the winter sports carnival (February) in attracting crowds. From the hilly residence districts there are superb views of the Cascade range, dominated by Mt. Hood. Schools include Reed College, Lewis & Clark College, and the University of Portland. West of the business section are Council Crest Park (magnificent view) and Washington Park (zoo, great rose gardens). North are Jantzen (bathing suits) Beach Park (amusements), on the Columbia, and Peninsula Park, with fine sunken rose gardens (700 varieties). At *Oregon City* (13 miles south, bus or motor) is the McLaughlin House National Historic Site, restored home of the pioneer settler and Hudson's Bay trader. This city was Oregon's first capital. One of the nation's great scenic drives leads east from Portland (motor or bus; sightseeing buses make the whole Mt. Hood loop), following the *Columbia River Highway* through a gorge cut in the Cascade range. The road runs close to the river, paralleling the Union Pacific tracks, and passing dozens of beautiful waterfalls. Bonneville (42 miles from Portland) is the site of the great dam in the Columbia river. Buses turn south beyond to circle glacier-clad *Mt. Hood*, reaching one of the most popular recreation areas in the Northwest. Travelers come in summer for mountain climbing, to fish for salmon and steelhead and cutthroat trout, and to enjoy magnificent wildflowers, deep forests, abundant wildlife, and wonderful scenery. In winter they come for skiing, ski jumping, tobogganing and other winter sports, for which there are facilities at Government Camp and Timberline Lodge in the Mt. Hood National Forest. (There is bus service direct from Portland, avoiding the longer route along the river.)

PRINCETON, N. J., a college town surrounded by handsome estates, is the seat of Princeton University, rich in tradition, in physical resources and in scholarship. Pre-Revolutionary Nassau Hall is treasured. Around it spreads a 1,300-acre campus with magnificent quadrangles, many in Collegiate Gothic style. Outstanding buildings are the library, chapel, art museum, Cleveland tower, the president's house (gardens beautiful in spring) and the 49,000-seat stadium (Palmer field) for football.

QUEBEC, vast province and ancient city, has been appreciated by generations of summer vacationers, and in recent years the area's winter sports facilities also have been popular with enthusiasts from both sides of the border. Montreal is the main gateway to the Laurentian Mountain playgrounds, scattered through thousands of square miles of rolling, wooded, lake-dotted uplands. *St. Donat*, on *Lac Archambault*, *Ste. Adele*, *Ste. Agathe des Monts* and *St. Jovite* are typical of the Laurentian resorts, well-equipped for swimming, boating, riding and other summer recreation, and for fishing and hunting, and skiing and the other winter sports, especially in the *Mont Tremblant* reservation. Beyond *Mont Laurier* is *Senneterre* (also reached from Quebec), and between those points is a great fishing preserve. *Montreal*, Canada's largest city, has historic buildings, magnificent churches, fine museums and gardens, and facilities for recreation. Across the broad St. Lawrence are the Eastern Townships, land of maples, placid streams and towering steeples. *Quebec*, on lordly bluffs commanding the wide river, has retained enough of its old French atmosphere to have a special charm for visitors, and its gardens, promenades, convents, churches and historic shrines are appealing. Winter sports are enjoyed right in the city and at nearby *Lac Beauport*. Farther north is *Laurentides Park*, an immense Laurentian Mountain reservation, including hundreds of lakes and fishing streams (red trout). On *Lake St. John*, reached at *Roberval*, fishermen seek the fighting ouananiche. The *Ste. Anne de Beaupre* shrine is near Quebec, while *Murray Bay* and

TRAINS TO ST. LOUIS

As a major gateway point St. Louis has direct trains or through cars from cities and major resorts in all parts of the U. S. Service is provided (initiating line) from:

Chicago by the Illinois Central, Wabash and Gulf, Mobile & Ohio.

Kansas City by the Wabash and Missouri Pacific.

New York by the Pennsylvania, Baltimore & Ohio and New York Central.

Boston, Springfield (Mass.), Albany, Syracuse, Rochester, Buffalo and Erie by the New York Central.

Cleveland by the Nickel Plate and New York Central.

Detroit by the Wabash and New York Central.

Philadelphia, Baltimore and Washington by the Baltimore & Ohio and Pennsylvania.

Richmond, Charlottesville, White Sulphur Springs and Charleston (W. Va) by the Chesapeake & Ohio.

Pittsburgh by the Pennsylvania.

Indianapolis and Columbus by the New York Central and Pennsylvania.

Cincinnati by the Baltimore & Ohio and New York Central.

Florida points by the Atlantic Coast Line and Florida East Coast.

Atlanta by the Nashville, Chattanooga & St. Louis.

Louisville, Nashville and Mississippi Gulf Coast resorts by the Louisville & Nashville.

Birmingham by the Louisville & Nashville and Illinois Central.

Memphis by the Illinois-Central and Frisco.

New Orleans by the Illinois Central.

Mobile by the Gulf, Mobile & Ohio and Louisville & Nashville.

Minneapolis-St. Paul by the Rock Island.

Omaha by the Wabash and Missouri Pacific.

Houston, Shreveport, Hot Springs (Ark.) and Little Rock by Missouri Pacific lines.

San Antonio by Missouri-Kansas-Texas and Missouri Pacific lines.

El Paso by Texas & Pacific.

Fort Worth and Dallas by Texas & Pacific and Missouri-Kansas-Texas.

Oklahoma City and Tulsa by Frisco.

Las Vegas, Salt Lake City, Seattle and Portland (Ore.) by Union Pacific.

San Francisco (Oakland) by Southern Pacific.

Los Angeles by Union Pacific and Southern Pacific.

Denver by Union Pacific and D.&R.G.W.

Colorado Springs by D.&R.G.W.

TRAINS TO TEXAS

Principal Texas cities have through trains or through cars from California, Colorado, Twin Cities, Chicago, St. Louis, Kansas City, Memphis, New Orleans, Washington and New York, and connections at principal gateway cities afford convenient service from other points. Principal through routes are:

Southern Pacific between Los Angeles and New Orleans, via Phoenix and Tucson, serving El Paso, San Antonio and Houston, connecting from San Francisco and the Pacific Northwest and from Florida and the South. Other S.P. trains or through cars New Orleans-Galveston, Houston-Corpus Christi, and Houston-Dallas.

Missouri Pacific lines through trains between St. Louis and Fort Worth, via Little Rock, serving Dallas, have through cars from Memphis, from New York (via Pennsylvania, serving Philadelphia, Columbus, Indianapolis), and from Washington (via Baltimore & Ohio, serving Cincinnati). M.P. St. Louis-San Antonio trains, serving Austin, have through cars from New York (via Pennsylvania, serving Philadelphia, Columbus, Indianapolis). M.P. St. Louis-Houston trains have through cars from Memphis and from New York (via Pennsylvania, serving Philadelphia, Columbus, Indianapolis). Other M.P. lines trains or through cars between Houston-Corpus Christi, Houston-Brownsville, San Antonio-Corpus Christi, San Antonio-Brownsville and New Orleans-Houston. In connection with the National of Mexico, M.P. lines have San Antonio-Mexico City trains.

Missouri-Kansas-Texas — Frisco joint through trains between St. Louis and San Antonio, serving Dallas and Austin, have through cars from Fort Worth, from Washington (via B. & O., serving Cincinnati) and from New York (via Pennsylvania, serving Philadelphia, Columbus, Indianapolis). Other M.-K.-T. trains between Kansas City-San Antonio, serving Dallas, Fort Worth, Austin.

Santa Fe through trains between Chicago and Galveston, via Kansas City, Wichita and Oklahoma City, serving Fort Worth and Houston. Other Santa Fe service El Paso-Albuquerque (connecting for Santa Fe, Denver), and Houston-Clovis, N. M., serving Lubbock, with through Dallas-Fort Worth-Los Angeles sleeper and through San Francisco (Oakland)-Houston sleeper (for New Orleans by M.P.).

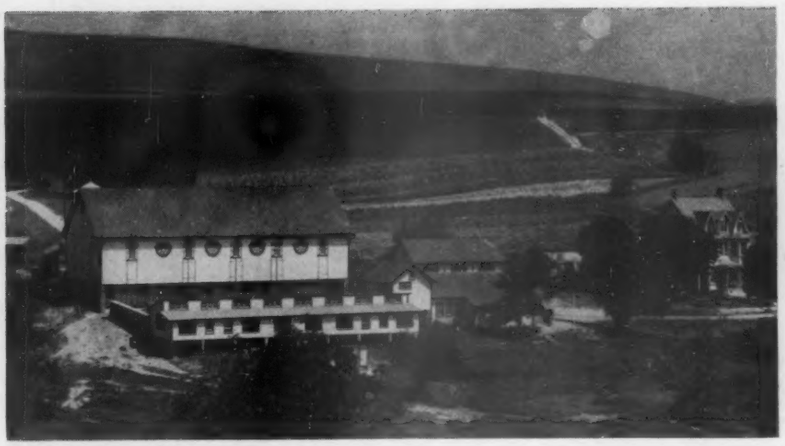
Rock Island through trains between Minneapolis-St. Paul and Houston, via Des Moines and Kansas City, serving Fort Worth and Dallas.

Burlington lines through trains between Denver and Dallas, via Colorado Springs, serving Fort Worth.

Texas & Pacific through trains between New Orleans and Fort Worth, via Shreveport, serving Dallas, and between Dallas and El Paso, serving Fort Worth, with through New York-El Paso sleeper (by Pennsylvania-Missouri Pacific, via Philadelphia, Columbus, Indianapolis, St. Louis, Little Rock) and through Los Angeles-Dallas sleeper (by Southern Pacific, via Phoenix and Tucson).

Oregon State Highway Commission

OREGON'S scenic Columbia River.



State Department of Commerce

PENNSYLVANIA Dutch country is unique in America.

Tadoussac are popular resorts on the north shore of the St. Lawrence. Many visitors take the spectacular *Saguenay* river trip. Bathers enjoy *Metis* and *Bic* on the south shore of the broad river.

RICHMOND, capital of Virginia, is of unusual interest for its historic shrines. The Capitol, of classical design, has historical portraits and statuary, including Houdon's Washington, made from life. The Confederate Congress met here 1862-65. Adjacent are the State Library and the State Museum, both packed with material of priceless historic value. Other buildings include the Confederate Museum, which in the Civil War was the residence of the president of the Confederacy; the old houses which were the homes of Robert E. Lee and Chief Justice John Marshall; and the city's oldest house, a memorial to Edgar Allen Poe, each having appropriate furnishings and relics. St. Paul's church, the "state church" of the Confederacy, has fine memorials and stained glass; the older, plainer St. John's church was the scene of Patrick Henry's "liberty or death" speech. Hollywood Cemetery is the burial place of U. S. Presidents, governors, Confederate generals and statesmen, scientists and scholars. On the city's western outskirts is the wooded rolling campus of the University of Richmond. Nearby, on bluffs overlooking the winding James, are fine mansions with spacious grounds and delightful gardens, some of which may be visited during Virginia's Garden Week (late April). Open through the year are Wilton, a typical brick plantation mansion of Georgian architecture. and magnificently situated Virginia House, property of the Virginia Historical Society, built here from the stone, glass and timbers of an ancient English manor house. Below Richmond, along the river, English settlers established their first firm foothold in America, and here colonial planters built great houses. Some of them can be visited during Virginia Garden Week, and the grounds and gardens of three of greatest historic interest are open the year round. Accessible from Richmond by motor, these are Shirley, 18 miles, built 1740, home of the Carters and birthplace of Robert E. Lee's mother; Berkeley, 21 miles from Richmond, built 1726, home of the Harrisons and birthplace of President William Henry Harrison; and Westover, 24 miles from Richmond, home of the Byrds and a center of the social life of the wealthy planters. *Richmond National Battlefield Park,* east of the city, is where armies of the North and South engaged in a desperate struggle for possession of the Confederate capital. Significant landmarks have been marked and restored.

ROCKLAND, Me., has a harbor for small craft, and its commercial fisheries (especially lobster) are important. Boats connect to islands in Penobscot bay, which have delightfully located summer cottages. Owl's Head light has a splendid view over the bay. *Rockport* and *Camden* (7 miles, bus) are lovely shore resorts, where winding roads are lined with fine summer homes. Yachts and small boats are thick in the harbors. Camden Hills State Park has wonderful views, attractive trails, and skiing is good at the Snow Bowl (tow), which has a ski jump, toboggan chute and skating rink. Camden has a noteworthy summer stock theater. *Thomaston,* 5 miles west of Rockland (bus), has interesting houses, including a reproduction of Montpelier, home of Revolutionary General Knox.

ROCKY MOUNTAIN NATIONAL PARK, in Colorado, has some of the grandest mountain scenery in America, and its nearness to Denver makes it a very popular vacation land (season June-September, but the lower elevations are accessible all year). It is a wildlife preserve (bighorn sheep, deer, elk, bear) but trout fishing is good. Motoring, hiking and horseback riding are popular, and winter sports are enjoyed at Hidden Valley. The park is entered from the east at Estes Park (bus from Denver) and from the west at Grand Lake, and the two are connected by a notable highway, Trail Ridge road, crossing the continental divide, several miles being at 12,000 ft. elevation. The views are thrilling. All-expense bus trips operate out of Denver, crossing the park on this highway and returning through parts of the Denver Mountain Parks system (see Denver above). The highest point in the park is Longs Peak (summit 14,255 ft.), which challenges mountain climbers. Most visitors are content to enjoy easier trails; they reach magnificent wildflower gardens (June), dramatically situated blue-green lakes, rushing torrents, and precipitous gorges. *Estes Park* is a popular vacation center, with hotels, dude ranches, camps and shops. *Grand Lake,* on the western border of the park, is a yachting center (regatta in August) and has good fishing. There is a winter sports tournament (ski tow).

ST. AUGUSTINE, Fla., oldest city in the U. S., has reminders of the Spanish settlers (balconied homes, patios, narrow streets). Ocean beaches are near (bus, bathing April-December) and the Matanzas river is fine for boating and fishing. For deep sea fishermen there is a drum rodeo (March-May) and a sea trout derby (October-February). Visitors see the "oldest house," and the Spanish-built fort in Castillo de San Marcos National Monument. On the ocean shore, 18 miles south of St. Augustine, is *Marineland,* a large outdoor aquarium.

ST. LOUIS is one of the busiest railroad passenger interchange points

Hopf from Newport Publicity Bureau

RHODE ISLAND shores at Newport have magnificent summer homes.

Union Pacific

COUNTRY LIFE in every state means relaxation and new experiences.

in the country. Many places of interest are in the vicinity of Forest Park, one of the largest and most beautiful city parks in America. The art museum has fine paintings and sculpture and period rooms. The open-air theater is widely known for its summer season of light opera. The Jefferson Memorial, with a comprehensive collection of historical material related to Missouri and the West, also houses Lindbergh's trophies. These structures are all in Forest Park, which also has a large zoo and botanical exhibits. Adjacent to the park are Washington University, with handsome modern buildings, the Cathedral, with noteworthy mosaic work and embellishments, and the Arena, a 21,000-seat indoor stadium for hockey, basketball, rodeos, ice skating shows and similar events, including the National Horse Show (early October). On the city's south side are the Missouri Botanical Gardens, considered the most complete in America. The civic center, adjoining the Union Station, includes a large auditorium.

SALT LAKE CITY, Utah's capital and headquarters of the Mormon church, has a spacious setting with views of distant Great Salt Lake and the Wasatch mountains. The University of Utah has fine modern buildings overlooking the city. Fort Douglas, a historic army post, is an extension of the university grounds. The Capitol also has a commanding location. In the city's heart is Temple Square, with the six-spired Mormon temple, the dome-roofed Tabernacle where organ concerts are broadcast, and the famed Seagull Monument. Adjacent are Lion house and Beehive house, homes of Brigham Young and his wives. West of the city (bus or motor, 16 miles) is *Saltair*, amusement resort on Great Salt Lake, where visitors try non-sink swimming in the saline waters. At *Alta* (28 miles southeast, motor) is a popular winter resort, with championship skiing from Thanksgiving to May (lifts).

SAN ANTONIO, Tex., is a busy commercial city, a winter resort, and a historic center. It is almost surrounded by armed services establishments, such as Randolph, Kelly, Brooks and Dodd fields (aviation) and Fort Sam Houston (army). It has a large Mexican population, and the Mexican shops and sidewalk booths, displaying fruits, exotic foods, pottery, hammered metal and other handwork, appeal to strangers. Schools include St. Mary's University and Trinity University; the latter has a 23,000-seat stadium. Relics of the Spanish pioneers who settled in the city in the 18th century include San Jose Mission national historic site (restored), one of the finest Spanish missions in the country; the San Francisco mission, still in use; La Purísima Concepcion mission; the Spanish governors' palace (restored, furnished in the period); San Fernando Cathedral; and particularly the Texans' historic shrine, the Alamo, where patriots resisted an overwhelming enemy force in a heroic struggle. The city's parks are noteworthy for semi-tropical luxuriance of foliage and flowers.

SAN DIEGO, oldest Spanish settlement in California, has one of America's best harbors and a remarkably equable mild climate that makes it a popular resort, particularly in winter. North of the business section is the old town, where the Spanish settlement began; there are several adobe buildings characteristic of that era. The pride of San Diego is Balboa Park, with a renowned zoo, a large amphitheater, fine gardens and landscaped plazas, a group of museum buildings (fine arts, natural history, mechanics), and a stadium seating 23,000. San Diego State College has a fine campus with modern buildings in the Moorish style. On the waterfront is anchored a full-rigged sailing ship fitted up as a marine museum; boats leave nearby for sightseeing cruises around the harbor, or for deep sea fishing (world famous for tuna). A ferry reaches *Coronado*, a charming seashore resort. Across the bay (bus, motor) is *Point Loma*, a federal reservation (Cabrillo National Monument) at the end of a rocky headland, commanding superb views of bay and ocean, islands and mountains. North of San Diego (bus, motor), and inland, is the mission (restored), first of the 21 founded by the Franciscans in California. Farther north, on the shore, is *La Jolla*, a fashionable shore resort, visited for remarkable caves cut in the cliffs by wave action, and for the oceanographic museum and aquarium. Beyond La Jolla is *Del Mar*, another beach resort, with a track for horse racing. South of San Diego, just over the Mexican border, is *Tijuana*, with legal gambling and curio shops selling Mexican wares; beyond is *Agua Caliente*, a more refined but similar border town (gambling halls, horse racing). Both are reached from San Diego by bus or motor.

SAN FRANCISCO, beautifully situated on a hilly peninsula between the

Pacific ocean and San Francisco bay, is a compactly built, enterprising and highly interesting city. Its hotels and restaurants are world famous. Its downtown district can be explored comfortably on foot; there are well organized sightseeing bus trips reaching other places of interest within the city, as well as other points in the San Francisco Bay area. The climate is equable, seeming rather cool in summer. Chinatown, largest concentration of Chinese in America, has quaint shops and inviting restaurants, and joss houses, temples and even a Chinese telephone exchange. Portsmouth square, on the edge of Chinatown, is the heart of the San Francisco of the gold rush period, and a few buildings of that era remain. Telegraph hill, beyond, is marked by Coit Memorial tower, with an observatory commanding a superb view of the city, San Francisco bay, the Golden Gate (the strait connecting the bay and the ocean), and the bordering mountains beyond. Golden Gate Park, stretching from the city's heart to the sea, has miles of roads and bridle paths. Along the ocean shore are seashore amusements, a great outdoor salt-water plunge, a zoo, and the famous Cliff House, overlooking wave-beaten rocks where sea lions congregate. At the tip of the peninsula is the Presidio, a large military reservation with scenic drives, and beyond it the great Golden Gate bridge reaches toward northern California. At the inner end of the Golden Gate is Fisherman's Wharf, with popular seafood restaurants. South of the city are two race tracks, Tanforan and Bay Meadows. *Palo Alto* is the seat of Stanford University, with handsome quadrangles of mission-style buildings, a church embellished with notable exterior mosaics, an art collection, and the towering Hoover library. North of San Francisco, across the Golden Gate, are other picturesquely located residential suburbs. Buses reach *Muir Woods National Monument*, one of the finest accessible redwood groves, where these extraordinary trees grow luxuriantly. Beyond is *Mt. Tamalpais*, with a road to the summit, where the view of ocean, bay and mountains is spectacular. From San Francisco the main highway north (scheduled bus tours) reaches numerous fine stands of magnificent redwoods, bits of the primeval forest preserved for nature lovers. East of San Francisco, across the bay, which is spanned by a remarkable bridge, over 8 miles long, are Berkeley, Oakland, and other important industrial and residential cities. *Oakland* is the terminus for through transcontinental trains and a busy port. Imposing buildings border the park surrounding Lake Merritt, where wild ducks abound in winter. Oakland's city rose garden is noteworthy, as are the art and natural history exhibits. Mills College is beautifully situated on hills overlooking the bay. North of Oakland is *Berkeley*, with a popular yacht harbor and shore park; it is the seat of the University of California, one of the world's largest.

State Highway Commission

SOUTH DAKOTA'S Sylvan Lake is surrounded by the scenic Black Hills.

Paul A. Moore, State Conservation Department

TENNESSEE'S Reelfoot Lake is on the midland migratory bird thoroughfare.

Its great white, red-roofed buildings, on a spacious landscaped campus, are grouped around a tall campanile. Collections in the libraries and museums include fine arts, natural history, and historic manuscripts and relics. The stadium seats 78,000. Parks on hills back of the city have complete recreational facilities.

SANTA BARBARA, Cal., is a beautifully located residential city, facing a brilliantly blue crescent bay. Santa Barbara College has a lovely setting near the notable Santa Barbara Mission, one of the best preserved and most complete of the famous mission chain. There are homes built in the Mexican period in the older part of the city, and visitors enjoy the courthouse (considered the most beautiful in America), the museums of art and natural history, the botanical garden, and delightful scenic drives in the hills and along the shore. There is a lovely beach, and surf and deep sea fishing are popular. Annual celebrations include the Old Spanish Days (mid-August) and a marine fiesta (early July). In spring and early summer, when the flowers are specially abundant and brilliant, there are organized garden tours, starting from the mid-city recreation center, in which visitors may see many beautiful private estates.

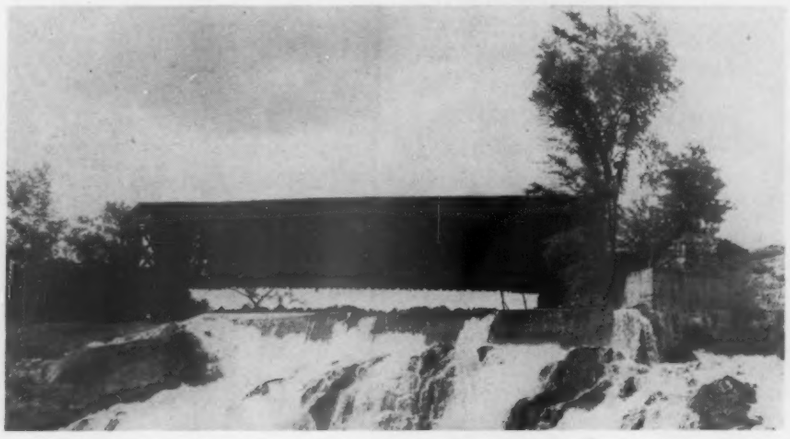
SANTA FE, N. M., differs from other state capitals in its evidences of the influences of Pueblo Indians and early Spanish settlers. It is a center for the New Mexico Pueblo country and attracts many tourists. The annual fiesta (precedes Labor Day) is a gala celebration. The old Spanish city surrounds the plaza, on which the long, low, adobe Palace of the Governors faces. Built about 1610, it now houses collections dealing with the history and Indian culture of the Southwest. Adjacent is the Art Museum. Other paintings and relics are shown in the Mission. St. Francis Cathedral is the burial place of leaders of Spanish explorations and settlement. "Indian Detour" bus cruises, originating in Santa Fe, are one-, two-,

State Highway Department

TEXAS cottonfields and oilwells have supported the state's rapid growth.

Union Pacific

UTAH'S Mormon pioneers built the striking Temple in Salt Lake City.



VERMONT treasures old covered bridges crossing rushing mountain streams.

or three-day trips in the Pueblo country north of the city, taking in the prehistoric *Puyé* cliff dwellings; the Frijoles Canyon section of *Bandelier National Monument*, which has unusual hewn cave rooms and communicating houses, all built by pre-Columbian Indians; the Indian pueblos of Santa Clara and San Ildefonso (black pottery; tribal dances in January and September); and the noteworthy adobe "apartment houses" of the Indians at *Taos* (tribal dances in January, May, June and September). Taos is a popular art colony with an art museum (including Indian handwork). Beyond San Ildefonso is *Los Alamos*, headquarters of atomic bomb development (40 miles; motor, not on "detour"). Skiiers flock to Hyde State Park (tow) and *Aspen Basin* (tow, lift) to enjoy this activity (December-April). For big game hunting and trout fishing the Pecos wilderness area, north of *Pecos* (25 miles east; motor) is popular. Nearby are ruins of an early Spanish mission.

SARATOGA SPRINGS has been a New York health resort for 150 years. Horse racing brings many visitors (thoroughbreds in August; harness races in June and September). The state-owned spa, affording mineral water baths and treatments (all year), has landscaped grounds surrounded by 1,200 acres of woodland threaded by footpaths and winding roads. The gardens (best in June) of Yaddo, a 500-acre estate, also are public. In the city elm-shaded streets lead to Skidmore College (girls) and a convention hall and local history museum (formerly the notorious gambling hall, Canfield's Casino). Nearby (motor) are Mt. McGregor, with the cottage where U. S. Grant died; Alpine Meadows, a ski center (six tows); and Saratoga Battlefield, a national park, the scene of the decisive battle of the American Revolution.

SAVANNAH, Ga., is a beautiful and historic city, with many houses characteristic of the old South. The azaleas, magnolias and oleanders in its parks and along its boulevards provide a colorful background for its monuments, old churches, museums and spacious mansions. Bonaventure Cemetery, with great trees draped in Spanish moss and magnificent plantings of azaleas and other flowering plants, is outstandingly beautiful. Savannah Beach (bus, 22 miles), on the Atlantic, has fine fishing and an excellent bathing beach (May-November). Nearby is Fort Pulaski National Monument, with a historic pre-Civil War masonry fortification.

SEATTLE, the largest city in the Pacific Northwest, landing point for Alaska steamers, is a beautifully situated gateway to a tremendous vacation land. Its site is an isthmus between Puget Sound (salt) and Lake Washington (fresh water), where all water sports are enjoyed. City parks have notable forests, flowers and scenic viewpoints. The University of Washington is magnificently located on the lake shore, looking toward Mt. Rainier. In the business district is the Smith tower, tallest building on the Pacific coast (500 ft.) with amazing views from its observatory. Ferries connect Seattle to *Bermerton*, site of a large U. S. naval station and shipyard; to Victoria, B. C., and to Port Angeles on the Olympic Peninsula. Buses run in summer to Mt. Rainier National Park. At *Snoqualmie Pass* (50 miles east; motor, bus) in Snoqualmie National Forest, in Seattle's municipal ski lodge (tows), one of several centers in the vicinity for skiing and other mountain sports. *Hyak* is another, nearby (Milwaukee trains; tows).

SEQUOIA NATIONAL PARK, in California, has superb canyon and mountain scenery in the high Sierra Nevada, including Mt. Whitney, highest point in the U. S., but the area's main attraction for visitors is the groves of incomparable sequoia trees, immensely big and immensely old. The General Sherman tree is the largest; others of interest are named for U. S. Presidents. The major groves and scenic points are reached by the so-called Generals highway, a scenic mountain road which winds across Sequoia Park and connects it to the General Grant Grove, part of adjacent *Kings Canyon National Park* where there are more big trees and spectacular viewpoints. Most of its area is accessible only by trail, usually by pack train. Sequoia Park has other fine primeval forests, tumbling streams, charming lakes, great cliffs, deep canyons, and remarkable rock formations. Trout fishing is encouraged, but wildlife (deer, bear, small animals, many birds) is protected. Easy paths reach many vantage points, and 700 miles of trails (horseback trips) into the remote parts of the park are increasingly popular with outdoors lovers. Rangers conduct nature hikes and campfire programs and there is a natural history

museum. Winter sports facilities at Wolverton bowl and Lodgepole draw devotees of skating, snowshoeing and skiing (December-March). The park is reached (bus, motor) from Fresno (90 miles), Visalia (50 miles), Bakersfield and other San Joaquin valley points, with service in summer by scheduled all-expense sightseeing tours.

SHENANDOAH NATIONAL PARK extends 75 miles along the wooded crest of the Virginia Blue Ridge, along which runs the scenic Skyline Drive, commanding remarkable views over the Piedmont to the east and across the broad Shenandoah valley to the Alleghenies. Trails reach waterfalls, shady ravines and rock summits. The forests include over 100 varieties of trees, and the spring wildflowers grow profusely. The park season is May-October, and blossoms and autumn foliage give the region brilliant color through that period. Most conspicuous are the redbud, dogwood, azaleas, mountain laurel, goldenrod and wild asters, among over 800 species of flowering plants in the park. In summer the park is traversed by sightseeing bus running between Charlottesville and Washington, D.C.

SUN VALLEY, an Idaho resort in a sheltered bowl-like intervale, with nearly every variety of recreation not dependent on salt water, is a Union Pacific property. Surrounded by mountains, it has skiing terrain unsurpassed in America (eight lifts), and Hollywood stars, headline athletes, and sports enthusiasts congregate in winter for skiing, skating, tobogganing, sledding, trap shooting and even swimming (outdoor warm water pool). In summer, too, come sportsmen, hunters, fishermen, swimmers and less active vacationers. West and north are the Sawtooth and Challis National forests, both offering big game hunting, fishing, and the scenery and recreation opportunities of forested mountains.

THOUSAND ISLANDS, in the St. Lawrence river, shared by New York and Ontario, are visited by boat (2½-hour, "50-mile ramble") from *Clayton* or *Alexandria Bay*, riverside summer resorts. Many of the islands have summer homes, others are state property where campers are welcome. Clayton has an annual canoe regatta (mid-August). *Canton* is the seat of St. Lawrence University. *Watertown* is the principal city in this district, and is a gateway to both the Thousand Islands area and to the west side of the Adirondacks.

TRAVERSE BAY resorts attract thousands of Michigan vacationers. Resorts include *Traverse City*, the area's principal city, where the annual Cherry Festival (mid-July) is a gala event. The bay gives sea-trout trollers ample opportunity to enjoy this sport. Drives around Old Mission peninsula and Leelanau peninsula, particularly in cherry blossom time, are rewarding. *Beulah*, on Crystal Lake, has fine fishing; ice fishing in winter is popular with hardy sportsmen. *Charlevoix* is in the center of an area covered with summer homes and cottages. Bathing, yachting, golf and other outdoor sports are enjoyed. The fishing is good, and winter sports facilities are growing in popularity. *Petoskey* has a winter sports-carnival (early February) and an annual Indian pageant (late July). There are many summer homes on nearby lakes. *Bayview* (adjacent) has a summer religious gathering and music school. *Harbor Springs* is another popular summer resort, where Lake Michigan's waters afford relaxation.

State Conservation Commission

VIRGINIA boasts of Virginia Beach as well as historic shrines and fine scenery.

State Advertising Commission

WASHINGTON proudly welcomes visitors to immense Grand Coulee Dam.

TRUCKEE, Cal., is a gateway to winter sports facilities in the Tahoe National Forest and to Lake Tahoe. *Norden* (10 miles, bus, motor, Southern Pacific train) and vicinity have fine facilities for all snow sports, and skiers flock there in the season (November-May). *Lake Tahoe*, unbelievably blue, surrounded by snow-crowned peaks, is one of the world's great beauty spots. It is encircled by a 75-mile highway (bus, motor) connecting dozens of small resorts, and there is a round-the-lake boat service. Recreation grounds are provided on the shore by the forest service, and there are roads and trails into the mountains.

TUCSON, Ariz., with an exceptionally sunny dry climate, is a winter resort of growing popularity. The season's peak (February) is marked by a festival and rodeo, Fiesta de los Vaqueros. Nearby are dude ranches and sportsmen's camps. The University of Arizona, with a large group of modern buildings, has the state museum (natural history, Indian relics)

State Publicity Commission

WEST VIRGINIA is a scenic state.

State Conservation Department

WISCONSIN in cherry blossom time is a joy to behold—and multitudes do.

South 9 miles (bus or motor) is the Mission of San Xavier del Bac, possibly the finest of all Spanish missions in the country, interesting for its history, architecture, and notable interior decoration. Indians at San Xavier have fiestas in early October and early December. Other drives from Tucson are to Sabino Canyon, a forest service recreation area (swimming, hiking) in the Santa Catalina mountains; Saguaro National Monument, which has many varieties of cactus (blossoms, late spring); Mount Lemmon recreational area, high in the mountains, with facilities for sports, including skiing; the Yaqui Indian village (Easter festival); and Tucson's mountain park, which has a 35-mile drive through arid mesas and greener uplands.

UPPER MICHIGAN has cool summers, fine hunting (duck deer, partridge, small game) and fishing (perch, pike, muskellunge, whitefish, bass), and long bitter winters favorable to all winter sports. The peninsula stretches along the south shore of Lake Superior from Sault Ste. Marie to Ashland, Wis. *Sault Ste. Marie*, Mich., and its twin city in Ontario, separated by ship canals connecting Lake Superior and Lake Huron, are gateways to the wilds of northern Ontario. There is an arena for ice skating. Annual events include a winter sports carnival (February) and a smelt fishing jamboree (May). From St. *Ignace* ferries connect to Mackinaw City on the lower Michigan peninsula, and to Mackinac Island. *Blaney Park* is a year-round resort, with fishing and hunting outdoor sports, woodland roads and trails, and snowshoeing, sleighing and skiing. *Manistique* is a gateway to Hiawatha National Forest, with recreation facilities, fishing and hunting. *Escanaba* is a boating and winter spirts center, with a winter carnival (February), summer festival (early July), smelt jamboree (April) and the Upper Peninsula state fair (mid-August). *Marquette*, with a scenic location on bluffs overlooking Lake Superior, has busy iron ore docks, a teachers college, and facilities for winter sports. *Ishpeming*, a mining town, has ski jumps and elaborate winter sports facilities. *Hancock* and *Houghton* are separated by a canal much used by ore boats. Houghton has the Michigan College of Mining and Technology. There is a stadium for hockey, and ski jumping and other winter sports are popular (winter carnival). North of Hancock is Keweenaw peninsula, on which are *Calumet* and *Copper Harbor*. Boats on Lake Superior connect Copper Harbor and *Isle Royale National Park*, an immense wilderness area and wild animal preserve with a rugged coast line and dense forests. Fishing is marvelous. The season is mid-June to mid-September.

WASHINGTON, D. C., entertains more visitors, with the possible exception of New York, than any city in America. They come to see their government in action, to see its historic shrines and monumental magnificence. Bus tours and taxis take strangers on carefully scheduled rounds to the outstanding points of interest in the city and its environs. The Capitol is a good place to begin; if Congress is in session a senator or congressman will provide cards to the galleries; the statuary and paintings and decorations can be seen any day. Opposite the Capitol is the

TRAINS TO WASHINGTON

Through trains and through cars are operated directly to or via Washington from most important cities and resorts east of the Mississippi, as well as from Texas and California. Connections at St. Louis, Chicago or New York provide service from most other points. Service to Washington (initiating carrier) is available from:

Boston, Providence, New Haven, Springfield and Hartford by the New Haven.

Ellsworth (bus from Bar Harbor), Bangor and Brunswick (Me.), all summer only, by the Maine Central.

Portland (Me.) and White Mountains points, both summer only, by Boston & Maine.

Montreal by Canadian National.

Buffalo, Erie, Princeton, Atlantic City, Indianapolis and Columbus by the Pennsylvania.

Chicago, Detroit, Cleveland, Pittsburgh and St. Louis by the Pennsylvania and Baltimore & Ohio.

Akron by the Baltimore & Ohio.

Cincinnati by the Baltimore & Ohio, Chesapeake & Ohio and Pennsylvania.

Louisville by the Chesapeake & Ohio and Baltimore & Ohio.

New York, Philadelphia, Wilmington (Del.) and Baltimore by the Pennsylvania and Baltimore & Ohio.

Richmond by the Richmond, Fredericksburg & Potomac.

Hot Springs (Va.), White Sulphur Springs, Charleston (W. Va.) and Huntington by the Chesapeake & Ohio.

Charlottesville by the Southern and Chesapeake & Ohio.

New Orleans by the Louisville & Nashville and Southern.

Mobile and Mississippi Gulf Coast resorts by the Louisville & Nashville.

Birmingham, Atlanta and Raleigh by the Southern and Seaboard Air Line.

Memphis, Chattanooga, Knoxville, Asheville, Durham, Charlotte and Aiken by the Southern.

Shreveport by the Illinois Central.

Pinehurst by the Seaboard Air Line.

Miami and West Palm Beach and intermediate Florida East Coast resorts by the Seaboard Air Line and Florida East Coast.

St. Augustine, Daytona Beach, Titusville and Fort Pierce by the Florida East Coast.

St. Petersburg, Tampa, Bradenton, Sarasota, Fort Myers, Clearwater, Ocala, Jacksonville and Savannah by the Atlantic Coast Line and Seaboard Air Line.

Orlando, Lakeland, Gainesville, Charleston (S.C.) and Wilmington (N.C.) by the Atlantic Coast Line.

Houston by Missouri Pacific lines.

Fort Worth by the Texas & Pacific.

San Antonio by the Missouri-Kansas-Texas.

Dallas by the Texas & Pacific and Missouri-Kansas-Texas.

San Diego, Los Angeles, Albuquerque and Santa Fe (bus to Lamy) by the Santa Fe.

Library of Congress, ornate but much admired, where visitors see the original Declaration of Independence and Constitution and a vast collection of historic manuscripts, maps, rare volumes and prints. Next is the austere Supreme Court building, adjoined by the Folger Shakespeare library, with a theater of the dramatist's time. Following Constitution avenue the visitor comes first to the National Gallery of Art (Mellon gallery), with one of the world's best collections of paintings; then to the National Archives (displaying historic documents), the Department of Justice (conducted tour through the F.B.I.) and the National Museum (separate buildings for natural history and fine arts, technology and science, and the Smithsonian Institution's graphic arts exhibits). Beyond the Freer gallery (oriental arts and works of Whistler), is the Bureau of Engraving and Printing, where the visitor sees currency and stamps in the making. To the north are the White House and, nearby, the Corcoran Gallery of Art (another outstanding collection of fine arts), the American Red Cross headquarters, the D.A.R.'s Memorial Continental Hall, and the Pan American Building (decorations and exhibits from Latin American states). West again on Constitution avenue, passing more magnificent marble and limestone structures, the visitor arrives at the Lincoln Memorial, from which he looks west across the Potomac to Arlington and east over a reflecting pool to the Washington Monument and the distant dome of the Capitol. The top of the monument (elevator) has an observation gallery with a view of the whole District of Columbia, the Potomac River valley, and wide reaches of Maryland and Virginia. South of the monument is the tidal basin, around which are the famous Japanese cherry trees (bloom varies, usually early April), with the classic white Jefferson Memorial beyond. Northwest from the White House is Georgetown, the oldest section of the city, with many charming small houses and a few great ones (Dumbarton Oaks, with formal gardens and a large wooded park, and Dumbarton house, the Colonial Dames headquarters, with wonderful antiques). Other points of interest in the Northwest section are the National Geographic Society, the Scottish Rite Temple, the Washington Cathedral (a great Gothic structure, uncompleted; fine stained glass, Wilson's tomb and a lovely Bishop's garden), and Rock Creek Park, at the lower end of which is the National Zoo (outstanding for birds and reptiles). The Northwest section has the principal foreign embassies (not open); the British, on Massachusetts avenue, is the most imposing. Colleges in Washington include Georgetown University, American University, George Washington University all in the Northwest section; Howard University (Negro), north of the Capitol; and Catholic University and Trinity College in the Northeast section. In Catholic University's spacious grounds the National Shrine of the Immaculate Conception, a great basilica, is under construction; visitors may see the completed sections, magnificently adorned. Beyond is the Franciscan monastery, with interesting chapels and shrines and a delightful garden. Still farther, in Maryland at suburban *College Park*, is the large campus of the University of Maryland (many modern brick buildings). Across the Potomac, in Virginia (bus), are the enormous Pentagon (not open), surrounded by a maze of highway "cloverleafs," *Arlington National Cemetery* (with tens of thousands of soldiers' graves, the tomb of the Unknown Soldier, a marble amphitheater, and beautiful, stately Arlington house, home of Robert E. Lee, furnished with antiques). Another bus trip in Virginia takes the visitor through *Alexandria*, which has solid blocks of well-kept colonial houses, Christ church (with Washington's pew), historic Gadsby's tavern and Carlyle house, and the National Masonic Memorial to Washington. Below Alexandria, on the Potomac, is *Mount Vernon*, magnificently kept and perfectly furnished home of Washington. Visitors come to Washington in all seasons; spring is the most popular, summer is sometimes very hot. Entertainment includes American League baseball, professional football, boat races, the spring Cherry Blossom festival, and the President's Inauguration (January each fourth year).

WEST COAST RESORTS of Florida reach from Tarpon Springs to Naples. The chief business center is *Tampa*; an important port on Tampa bay. The city has a municipal pier (fishing), and fishing boats are well patronized for trips into the Gulf of Mexico (tarpon tournament, July). The University of Tampa has a Moorish-type main building in landscaped grounds. There is dog racing just north of the city (January-April) and Sunshine Park has horse racing (January-February). The year's big event is the state fair and Gasparilla Carnival (February). West of Tampa, on the shore of the beautiful blue Gulf of Mexico, are Tarpon Springs, Dunedin and Clearwater. *Tarpon Springs* has fine deep sea and fresh water fishing to entertain visitors, but its big attraction is the colorful sponge fleet. The Greek cross ceremony (January 6) attracts thousands. *Clearwater* has facilities to accommodate a large influx of winter vacationers. There is a yacht club (snipe regatta, March) and a beach club, and abundant recreational facilities are provided. *Belleair* is an adjacent community of winter homes. Sunny *St. Petersburg*, stretching between the gulf and Tampa bay, is the largest West Coast resort. Visitors enjoy a large pier, complete recreational facilities, yacht basins, the world's biggest shuffleboard club and thousands of green benches on the sidewalks. There is a dog track (racing January-April); and the deep sea fishing is highly regarded (kingfish derby, April; tarpon derby, May-July; weakfish, January; sheepshead, November; redfish, August). For smaller fish, anglers line the piers and bridges at all seasons. Adjoining St. Petersburg on the gulf side is a string of sand keys, with accommodations for visitors and magnificent beaches. *Pass-a-Grille* is the outermost of these popular island resorts. On the mainland, south of Tampa, is *Bradenton*, on the Manatee river (fine fishing), with auditorium, pier, yacht basin, and the usual outdoor sports facilities. *Sarasota* has wonderful wide Lido Beach, with a casino, pool, and other accommodations. Fishing is fine (tarpon tournament, June-August). In addition, Sarasota has the splendidly housed Ringling Museum of Art (many old masters, especially Rubens), the bay-front Ringling mansion (a Venetian palace in beautifully landscaped grounds), and a circus museum. The Ringling Brothers-Barnum & Bailey circus is in winter quarters in Sarasota December-March, giving regular exhibitions. *Venice*, below Sarasota, is another center for tarpon fishing, as is *Boca Grande*, which has fine estates and sports and bathing facilities. *Punta Gorda*, on Charlotte Harbor, has a winter fishing contest (trout, bass, redfish) and also caters to devotees of tarpon fishing. There are facilities for boating and outdoor sports. *Fort Myers* has a balmy winter climate which has led many Northerners to built winter homes on its palm-bordered streets. Tarpon (June September) and other deep sea fish are brought in to Fort Myers docks in numbers, and the usual sports facilities are available. Edison's home is maintained as a museum, and the Pageant of Light (February) is a gala annual event. A superb gulf beach, Fort Myers Beach, is 15 miles south (bus). *Naples*, on the Gulf of Mexico at the edge of the Everglades, likewise has a splendid wide white beach, and facilities for fishing. Hunting for wild turkey, bear and deer appeals to sportsmen.

WHITE MOUNTAINS scenery and cool summers have attracted generations of vacationers and sightseers to New Hampshire. The ranges are divided by picturesque notches threaded by railroads and highways. Gateways are Plymouth on the south, Woodsville, Littleton and Lancaster on the west, and North Conway and Gorham on the east. These towns have accommodations for travelers, as do resort centers in the mountains, such as Jackson, Randolph, Jefferson, Dixville Notch, Whitefield, Maplewood, Bethlehem, Franconia, Fabyan and Bretton Woods. The mountains are beautifully forested except on their rocky summits. The outstanding peak is *Mt. Washington*, reached by cog railroad from Base Station (near Fabyan and Bretton Woods) and by automobile from Glen House (bus). The view from the sum-

Union Pacific

WYOMING is cowboy land.

mit reaches from Montreal to the Atlantic ocean, encompassing peaks and valleys, farmlands and lakes and haze-blue distances. *Lost River* (rock formations, falls, wildflower gardens) is on the Kinsman Notch road. Franconia Notch has the *Flume* (cascades), *Great Stone Face* and *Cannon Mountain* Lift (cable-borne tram cars to summit, superb view, popular ski trails include a steep 2½-mile run); Crawford Notch has cascades. *Jackson*, center for summer visitors and winter sports enthusiasts (*Thorn Mountain* lift, trails, slopes) and Glen Ellis falls are on the Pinkham Notch road; *Dixville Notch*, far north of the most frequented resort district, is wilder and rockier than the others. *Berlin*, a factory town, has a spectacular ski jump; *Bethlehem*, with hotels, shops and recreation grounds, has a magnificent view of the mountains from Mt. Agassiz; *Bretton Woods* has fashionable hotels and handsome summer homes; *Gorham* has superb views and a wonderful birch-bordered drive down the Androscoggin river; *North Conway* has ski runs on Cranmore Mountain (tramway) and a great viewpoint, Cathedral Ledge; and *Randolph* and *Jefferson* have the appeal of wider vistas and stone-fenced farms.

WHITE SULPHUR SPRINGS, W. Va., fashionable and historic year-around vacation and health resort, has vast park-like grounds in an Allegheny Mountain intervale. Nearby forest areas provide fishing and hunting, and there are varied outdoor sports.

WILLIAMSBURG, Va., is a college (William & Mary) and tourist town. It also is a reconstructed colonial city, where the British flag still flies over the Capitol cupola. Along the streets are taverns, artisan's shops, and stately and simple homes in beautiful gardens, as well as the colonial government buildings. The regular tour includes the Capitol, the colony's gaol, the Raleigh tavern (where Phi Beta Kappa was organized), the public magazine (or armory), the Ludwell-Paradise house (one of the finer town houses of the colonial planters), the Wythe house (home of a signer of the Declaration of Independence) and the Governor's Palace, with remarkable formal gardens. In addition, strangers visit Bruton Parish church and the Wren building of William & Mary College, built in 1695. Walks past other homes and gardens are rewarding. South of Williamsburg 6 miles (motor) is *Jamestown*, with the historic ruins of the first permanent English settlement in America. East of Williamsburg 13 miles, by a landscaped parkway, is *Yorktown*, scene of Cornwallis' surrender, like Jamestown a part of the Colonial National Monument. The town has charming colonial buildings, most of them private. The park service has reconstructed entrenchments and put up markers to tell the story of this battle.

WISCONSIN LAKES REGION has many resorts for fishermen, hunters, campers, and lovers of outdoor life, and a number of them also have facilities for winter sports. Muskellunge and wall-eyed pike are much sought in the dozens of lakes and streams, and hunters find ducks, geese, bear, and native game birds. The principal town in the area is *Rhinelander*; others are *Woodruff-Minocqua*, *Tomahawk*, *Three Lakes*, and *Eagle River*.

YELLOWSTONE NATIONAL PARK, in Wyoming, is world-renowned for its geysers. Almost equally appealing are its waterfalls, colorful canyon, great lake and hot springs; its friendly (but dangerous) bears, its deer, elk, buffalo and mountain sheep; its evergreen forests and acres of wildflowers of hundreds of varieties; its fine fishing, high summits, and cool, clear, pollen-free mountain air. The park has 900 miles of trails and 300 miles of roads, but the average visitor confines his trip to the so-called loop highway which reaches the outstanding points of interest. This loop is connected by spurs to each of the park entrances, through all of which buses are operated in conjunction with around-the-loop bus service. Bus operations are coordinated with train service at the several rail gateways to the park, and tours may be arranged to enter at any entrance and leave either at the same or any other entrance. The Union Pacific serves West Yellowstone gateway; the Burlington the Cody and Billings gateways, the Milwaukee the Gallatin gateway, and the Northern Pacific the Livingston and Billings gateways. All-expense bus tours may be included in railroad tickets, these being of two, three, or more days' duration. Principal centers of accommodations and natural wonders on the 144-mile loop road, starting at the north entrance, are: Mammouth Hot Springs, Norris Geyser Basin, Old Faithful, Yellowstone Lake, Yellowstone Falls and canyon, and Tower Falls. The regular touring season is late June to mid-September. Of the approach roads, that from Cody to the east entrance traverses a scenic red-walled canyon hardly inferior to the park's attractions, and the less-used road from Billings via Bear Tooth pass, reaching an elevation of about 11,000 ft., is one of the most spectacular rides in the Rockies. The roads from Livingston and Gallatin Gateway follow mountain-walled river valleys. The south entrance connects with *Grand Teton National Park* (bus service), with some of America's finest alpine scenery. This park challenges expert mountain climbers with its precipitous cliffs, majestic peaks and hanging valleys. Trails for horseback or hiking lead to charming lakes, breath-taking viewpoints and wildlife haunts. The highway from Yellowstone Park skirts Jackson Lake and Jenny Lake, from which there are inspiring views. In the vicinity are dude ranches, wildlife preserves, and fine fishing.

YOSEMITE NATIONAL PARK, in California, includes the renowned Yosemite valley, and also a great mountain wilderness country reaching to high summits of the Sierra Nevada. Of various roads into the park the most used start at Merced and Fresno (bus, motor). The valley has the principal accommodations, and here the visitor sees the magnificent waterfalls, the great sheer domes and pinnacles of rock forming the canyon walls. The falls are best in May and June; then, and on week-ends through the summer, the valley may be very crowded. Outdoor entertainments, ranger lectures and a museum are provided. The valley is open all year; mountain roads are closed in winter. Motor service is available from the valley to Glacier Point via Badger Pass. The view of the valley from Glacier Point is the climax of Yosemite panoramas. *Badger Pass* is an attractive winter sports center, very popular with skiers (lift, tows). Other accessible attractions in the park are the big tree groves, second only to those in Sequoia National Park, the cascades and gorges and the wildflowers of the Toulumne meadows.

ZION NATIONAL PARK is a region of spectacularly colorful canyons and verdant intervales along Utah's Virgin river. Its outstanding features are the gigantic rainbow-hued rock formations (thrones, temples, domes and pyramids) seen from the highway used by park buses and by trails for horseback riders, hikers and mountain climbers. Usually visitors see Zion on combination tours taking in the Grand Canyon north rim and Bryce Canyon, reached through a mile-long tunnel cut in the side of a cliff (windows afford fine canyon views). The principal entrance is Cedar City (Union Pacific sleepers in summer).

(Continued from page 18)
pany has been organized into three main divisions—road machinery, steam power and special fabrication. As one of the three division managers, Mr. Williamson will direct all sales programs, advertising and new product development for the road machinery division, and will supervise and work closely with the Bros distributor sales

A. O. Williamson

organization. He joined the company in 1933, when the road machinery division was formed, and worked successively as sales engineer and general product engineer before his recent appointment.

L. G. Draper and **G. C. McBroom** have been elected vice-presidents of both the **Lone Star Steel Company** and its subsidiary, the Texas & Northern.

John B. Van Why has been appointed sales representative in the Connecticut, Rhode Island and western Massachusetts area for the **Joseph Dixon Company,** Jersey City, N. J. Mr. Van Why will handle Dixon Silica-Graphite paints and Dixon graphite and graphited lubricants.

In connection with its new railroad sales program, the **Wright Power Saw & Tool Corp.,** Stratford, Conn., has appointed the following exclusive sales representatives: **R. B. Hornberger,** 461 Market street, San Francisco; **Fred S. Schwinn,** H. W. Lewis Equipment Company, 429 Hoefgen avenue, San Antonio; **J. B. Akers, Jr.,** 1102 DuPont Circle building, Washington, D.C.; **William D. Hoffman,** Railway Track Work Company, 3207 Kensington avenue, Philadelphia; and **Robert J. Wylie,** Robert J. Wylie Company, 612 Pioneer building, St. Paul.

Charles Sanders, formerly western sales manager for the transportation division of the **Minneapolis-Honeywell Regulator Company,** at Chicago, has been appointed sales manager of the division to succeed **Maurice R. Eastin,** who has resigned. **Earle Barker,** associated with the transportation division for the past five years, has been appointed its eastern sales manager. Mr. Sanders, with new headquarters in Minneapolis, will direct sales of control equipment for railway cars, diesel locomotives, streetcars, subway cars and buses.

W. Lyle Richeson has resigned as vice-president of the American Car & Foundry Co. at New York and has been elected vice-president of the **Westinghouse Air Brake Company** at Wilmerding, Pa.

EQUIPMENT AND SUPPLIES

N. & W. Orders 15 Steam Switchers, 2,025 Cars

The Norfolk & Western has authorized construction of 15 coal-burning switching locomotives and 2,025 freight cars at a cost exceeding $13,500,000. The locomotives and 1,525 of the cars —1,000 70-ton 46-ft. all-purpose gondola cars, 500 50-ton 46-ft. gondola cars and 25 70-ton flat cars with cast steel underframes—will be built in the road's own shops. The remaining cars, 500 steel boxcars of the B8 class, are being built by the Pullman-Standard Car Manufacturing Company for delivery next fall.

Construction of the new switchers, of the 0-8-0 type, will begin in December. When they are finished the N. & W. will have 75 of that type. Each has a tractive effort of 62,932 lb., cast steel bed frames and oil lubrication of the driver journals. They are replacing older switchers originally designed for road operation and will have lower maintenance cost and higher availability, the road said.

FREIGHT CARS

7,403 Freight Cars Delivered in April

New domestic freight car deliveries in April totalled 7,403, compared with 8,159 last March and 8,274 in April 1951, the American Railway Car Institute and the Association of American Railroads have announced jointly. Orders for new freight cars in April totalled 397 and the backlog of cars on order and undelivered on May 1 was 108,270.

A breakdown by types of cars ordered and delivered in April and of cars on order on May 1, appears in the table on page 176.

THIS WAS THE PARCEL CHECK ROOM of the North Western's Chicago terminal. A few weeks ago, however, all parcel racks and counters were removed and replaced by these banks of lockers furnished and maintained by the American Locker Company. Former parcel room employees were absorbed into the baggage room forces and manual checking of parcels was discontinued entirely (except for occasional out-size parcels which are accommodated in the baggage room). In this new section there are 354 locker cabinets of varying sizes including several for accommodation of golf bags. In addition there are 802 cabinets located in other public rooms throughout the terminal.

THE ALEXANDER RAILROAD, locally owned and operating 18.5 miles between Taylorsville, N. C., and Statesville, completed its sixth year in business last November, and paid its fifth annual dividend (4 per cent). Contributing to this achievement is No. 2 (above), a 44-ton diesel-electric switcher, the road's only locomotive. Since it replaced steam power, average costs for locomotive fuel have been cut from $26 to less than $5 a day.

Type	Ordered April '52	Delivered April '52	On Order & Undelivered May 1, '52
Box—Plain	2	2,443	32,742
Box—Auto	0	0	750
Flat	1	320	3,058
Gondola	114	1,269	22,213
Hopper	0	2,111	33,581
Covered Hopper	250	217	5,049
Refrigerator	0	199	4,278
Stock	0	0	500
Tank	1	690	5,429
Caboose	15	54	353
Other	14	100	317
TOTAL	397	7,403	108,270
Carbuilders	379	5,204	70,071
Railroad Shops	18	2,199	38,199

The **Texas & Pacific** board of directors has authorized construction of 200 70-ton hopper cars.

The **Western Pacific** has ordered 100 70-ton steel welded ballast cars from the Pullman-Standard Car Manufacturing Company. Delivery of the cars, which will cost approximately $755,400, is scheduled for the first quarter of 1953. The road's intention to purchase these cars was reported in *Railway Age*, March 3, page 81

LOCOMOTIVES

The **Rutland** has ordered four 1,600-hp. diesel-electric road-switching locomotive units from the American Locomotive-General Electric Companies. All the units are equipped with steam generators.

SPECIAL

The Eddystone Division of Baldwin-Lima-Hamilton Corporation has received recent orders for air dump cars as follows: **Oliver Iron Mining Company,** 95 100-ton and 44 90-ton cars; **Union Miniere du Haut Katanga** (Belgium Congo), 30 28-yard cars; **United States Steel Company,** 12 50-yard cars: **Norfolk & Western,** 10 30-yard cars; **General Steel Castings Corporation,** three 30-yard cars. The **Phelps Dodge Corporation** has ordered 44 90-ton air dump cars and six 50-ton flat cars.

ABANDONMENTS

Application has been filed with the I.C.C. by:

NEW YORK, NEW HAVEN & HARTFORD.—To abandon a branch line from a point near Tremont, Mass., to Fairhaven, 12.8 miles. The road said traffic on the line has decreased, and it is operated at a loss.

CONSTRUCTION

Atchison, Topeka & Santa Fe.—The Potter Construction Company, Fort Worth, Texas, has been awarded a contract for an addition to the road's freight house and office building in that city.

Chesapeake & Ohio.—About July 15 work will be completed on a $100,000 improvement program in the assembly and repair yards at Paintsville, Ky., in the Big Sandy coal fields. Two new tracks and a ten-car caboose track will be added to the assembly yard. When work is completed, the yard will have a capacity of 611 cars. The car repair yard will be relocated and rebuilt to hold 30 cars. To provide for adequate drainage, a new subdrainage system will be installed. Grading for the project will be done under contract by the Forbes Construction Company, Huntington, W. Va.

Chicago, Rock Island & Pacific—**Atchison, Topeka & Santa Fe.**—The I.C.C. has postponed, for an indefinite period, the effective date of its recent order approving relocation of existing trackage, owned by these two roads, at Oklahoma City, Okla. Parties protesting the trackage change have renewed their request for public hearing. (*Railway Age*, April 7, page 138).

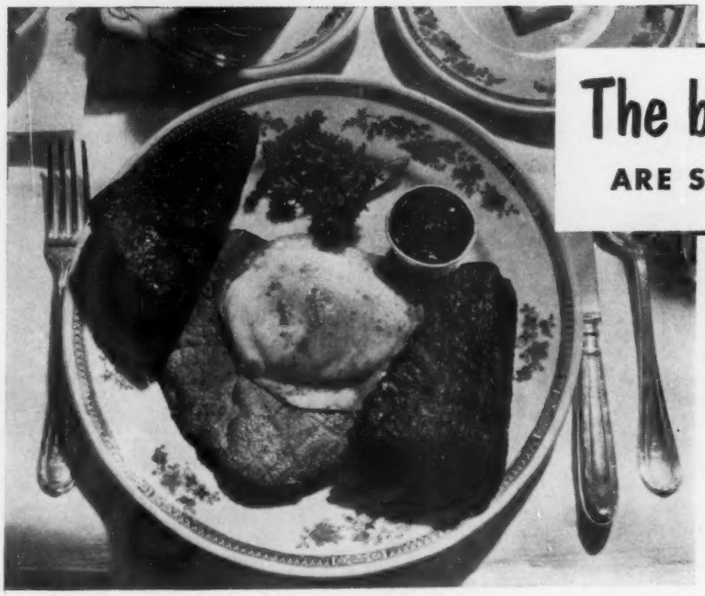
Duluth, South Shore & Atlantic.—This road has asked for I.C.C. authority to construct and operate a 14-mile line from Bergland, Mich., to White Pine. The new line, costing an estimated $642,884, would be constructed for the account of the White Pine Copper Company, but would be operated, maintained and subsequently acquired by the railroad. The copper company has been authorized a $57,185,000 loan by the Reconstruction Finance Corporation to help develop the mine and other facilities at White Pine. The community at present has no rail service. In building the new line, the road said it would furnish rail and metal track material worth about $200,000, and the copper company would pay the remainder of the cost.

Erie.—Construction of the new $1,300,000 diesel shop in the Brier Hill yard at Youngstown, Ohio (*Railway Age*, March 17, page 112), is expected to start June 1, Stanley F. McGranahan, general manager, said in announcing award of the building contract.

The building will be erected by Charles Shutrump & Sons Co. of Youngstown. The shop should be in operation by May 1953, according to Mr. Granahan. In addition, the Erie will use its own forces for necessary track and drainage work as well as oil and sanding facilities. Cranes, drop table, and other shop machines will be furnished by the Erie but installed by contractor. The Brier Hill diesel shop will be used exclusively for maintenance and repair of freight, passenger, and switch locomotives operating in the Mahoning division area. The Erie expects to be completely dieselized there during the early part of next year.

Midland of Manitoba.—Construction of a 35,000-gal. fuel oil storage tank with pump house and stand pipe is being carried out at the St. James enginehouse, Winnipeg, Man., at an estimated cost of $15,300. The tank itself is being built by the Manitoba Bridge & Engineering Works, Ltd., of Winnipeg while the balance of the work is being done by company forces. It is expected work will be completed by August 31.

Pennsylvania.—Contracts for machinery to operate this road's new ore unloading pier in the Delaware River have been signed, as preparatory work on the site of the new facility at Greenwich point, in South Philadelphia, progresses to where actual construction of the $8,000,000 pier can begin. Hundreds of the 1,210 reinforced concrete piles which will be driven into the river bed to provide a base for the pier structure, have been completed in assembly



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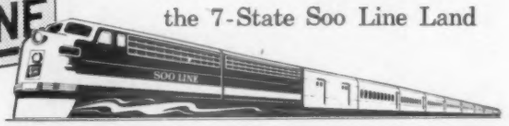

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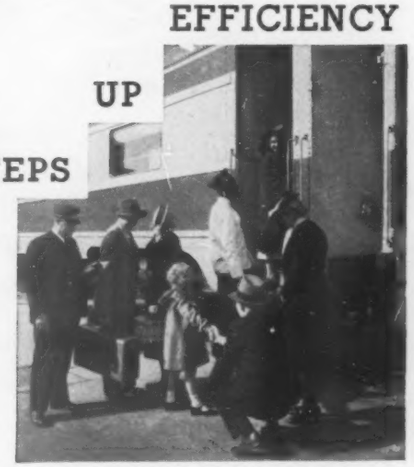

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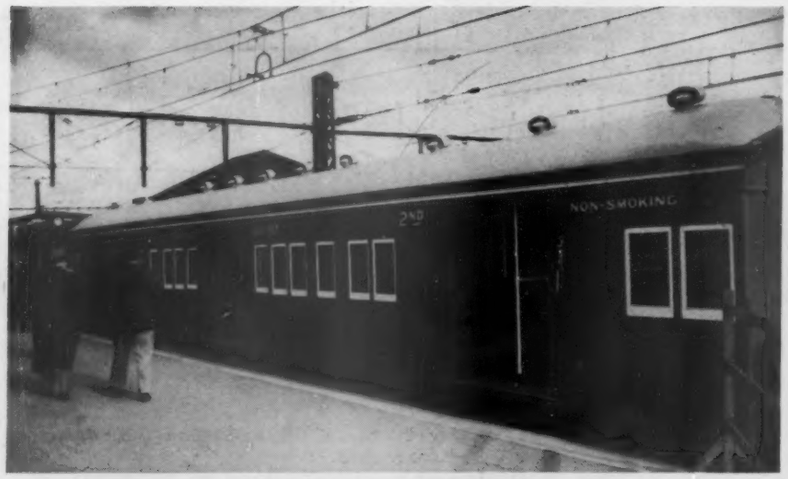
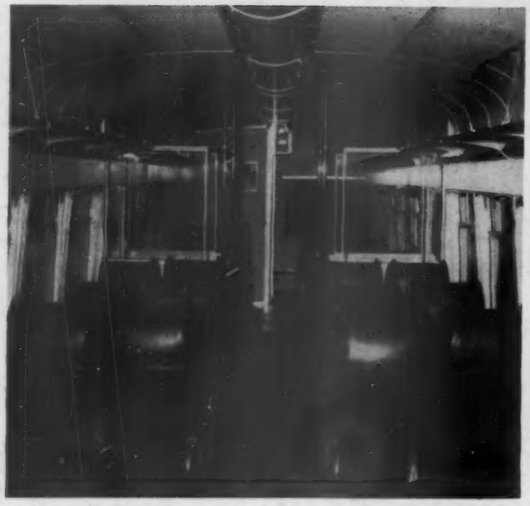




AMONG THE LATEST TYPES of rolling stock for the Victorian State Railways (Australia) are an experimental suburban car (above) for electrified lines in the vicinity of Melbourne, and a diesel rail car, the interior of which is shown at the left. The suburban car seats 66 passengers and holds 180; the 119-ft., 280-hp. diesel car seats 94.

line operations at the scene. Dredging of the river for 850 feet out from the shore line has been completed. The pier is being built just north of the road's coal dumper and yard tracks. Switches and other operating facilities are under construction as support for the new operation.

The machinery contracts are for two unloading machines and a conveyor belt system to handle the pier's initial rated capacity of 2,400 tons of ore an hour. The unloading machines will be built by the Industrial Brown Hoist Company of Bay City, Mich., and Heyl & Patterson, Inc., of Pittsburgh, has been awarded the contract for the conveyor belt system. A bucket on each machine will lift 17 tons of ore at a bite. Unloading cranes, to which they will be attached, will have a reach of 72 feet on each side of the pier. The two 54-inch belt conveyors will each be 1,600 feet long with a maximum capacity of 4,410 tons per hour. Heyl & Patterson also will build the carloading house to which belts will bring the ore for handling through steel bins and hoppers to railroad cars.

The railroad plans to place the pier in service by summer of 1953. It will be equipped to handle two ships at once, with provision to expand capacity ultimately to handle four ships simultaneously. The pier is designed to handle iron ore en route to steel mills in this country from new sources of supply being developed in Venezuela, Brazil, Chile and Labrador, as well as other foreign ore.

FINANCIAL

Atlantic Coast Line.—*Competitive Bidding Relief.*—The firm of Halsey, Stuart & Co. has asked the I.C.C. for authority to intervene in opposition to the Coast Line's application for competitive bidding relief on a proposed $20,000,000 bond issue. (*Railway Age*, May 5, page 96). The investment firm said "no valid grounds" exist for the requested exemption from competitive bidding, and it added that it intends to bid for the purchase of the securities should they be offered for sale. The A.C.L., which recently sold $22,000,000 of general mortgage series B bonds at private sale, seeks authority to negotiate for a similar sale of the proposed new bonds (general mortgage, series C). Meanwhile, the commission has decided to hold a public hearing on this latest application for competitive bidding relief.

Baltimore & Ohio.—*Trackage Rights.*—Division 4 of the I.C.C. has approved modification of the trackage rights agreement under which this road operates over 27.6 miles of railroad owned by the Cherry River Boom & Lumber Co. The approved changes provide for an increase in payments to the lumber company of about 40 per cent. The B.&O. cited increased costs and higher tonnage as basis for the increased payments. The rail line involved extends from Donaldson, W. Va., to Scott Junction.

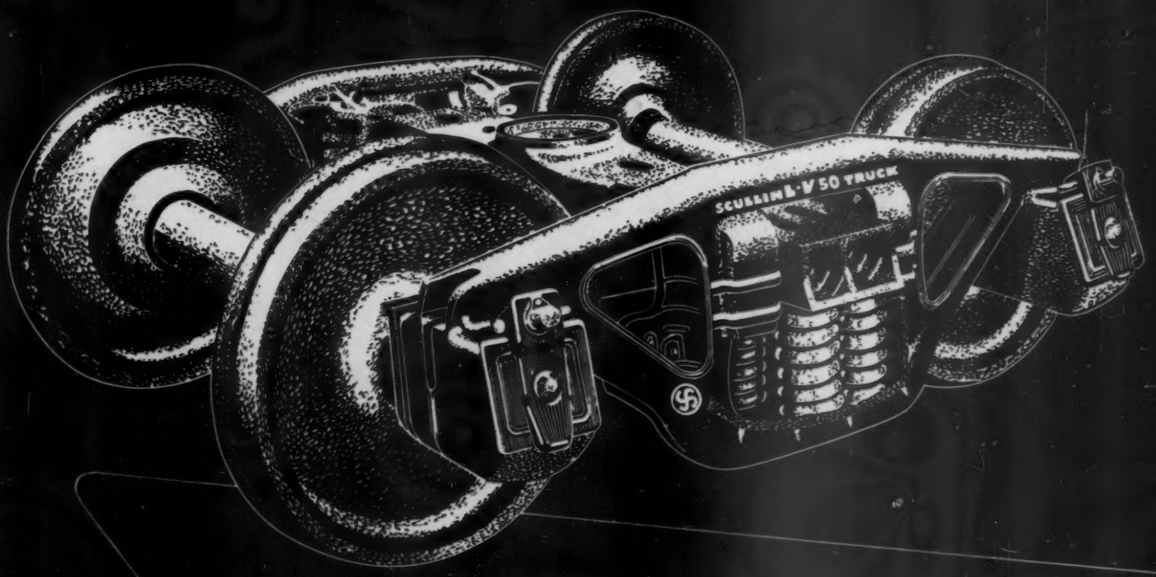
Chesapeake & Ohio. — *Trackage Rights.*—Division 4 of the I.C.C. has approved this road's plan for new trackage-rights arrangements at Chicago. The plan contemplates operation over about 9.5 mi. of lines of the Erie, Chicago & Western Indiana, and Illinois Central and abandonment of operation over about 11 mi. of New York, Chicago & St. Louis lines. (*Railway Age* of January 14, page 232.)

Duluth, South Shore & Atlantic-Minneapolis, St. Paul & Sault Ste. Marie.—*Sainte Marie Union Depot.*—These roads have asked the I.C.C. for authority to acquire and operate the properties of the Sainte Marie Depot Company at Sault Ste. Marie, Mich. The applicants already own all the depot company stock, and they propose to surrender this stock and dissolve the separate depot company. The depot facilities include the passenger and freight stations, an office building and about 0.5 mile of main line trackage.

Illinois Central.—*Changes in Capital Structure.*—Directors of this road have withdrawn the recent proposal to change the common stock from $100 par value into stock without par value (*Railway Age*, April 21, page 75). President Wayne A. Johnston has reported that the directors have decided "to give favorable consideration to the views of certain large stockholders and others who prefer authorization of $100 par value to a no par value stock." There was no change in the proposal to increase the number of authorized common shares from 1,390,511 to 3,500,000.

Jefferson Southwestern. — *Joint Control by Three Roads.*—The Illinois Central and Missouri Pacific have each filed with the I.C.C. an application for authority to acquire a one-third interest in this road from the Chicago & Eastern Illinois. The applications explained that the latter obtained an option to purchase all of the J.S. stock

(Continued on page 182)



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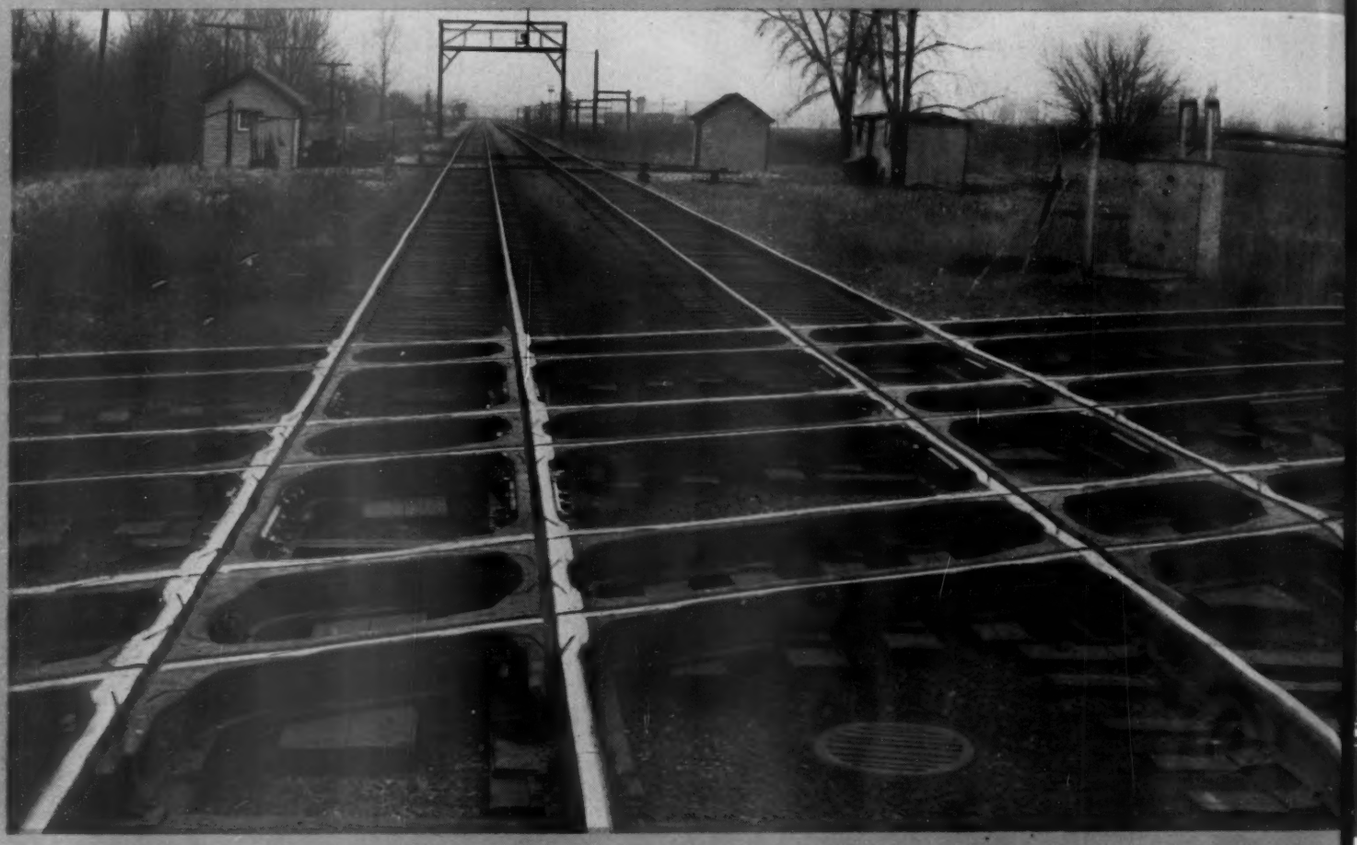

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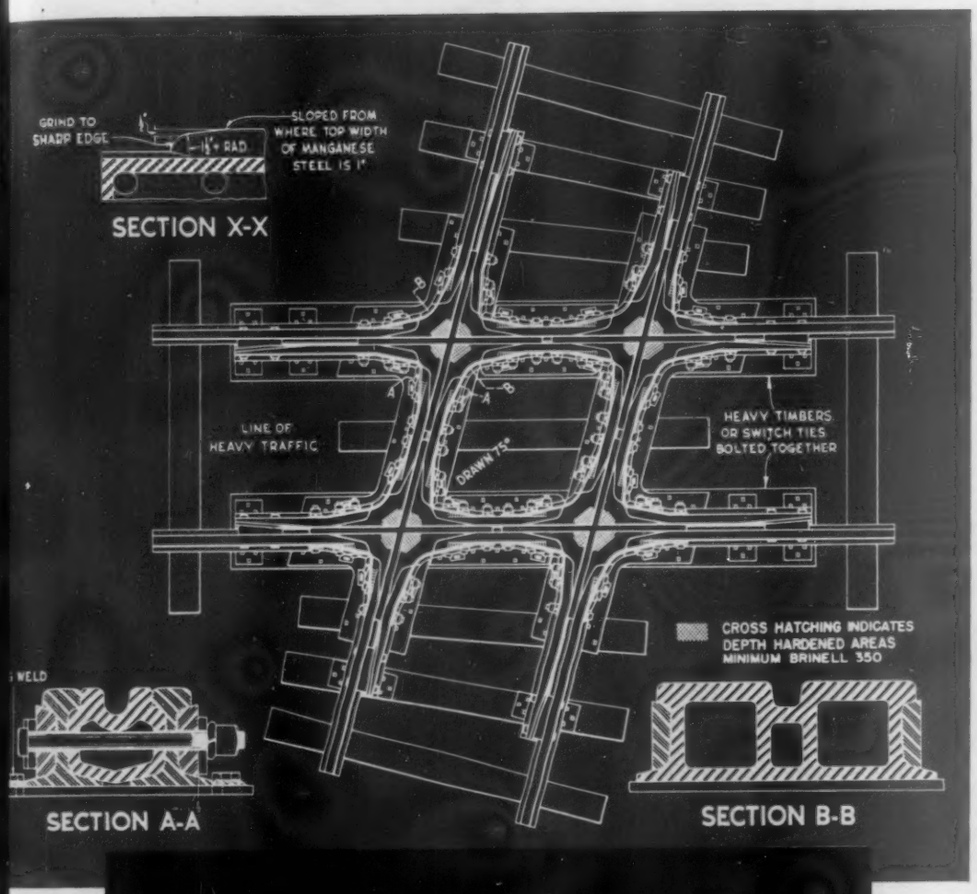
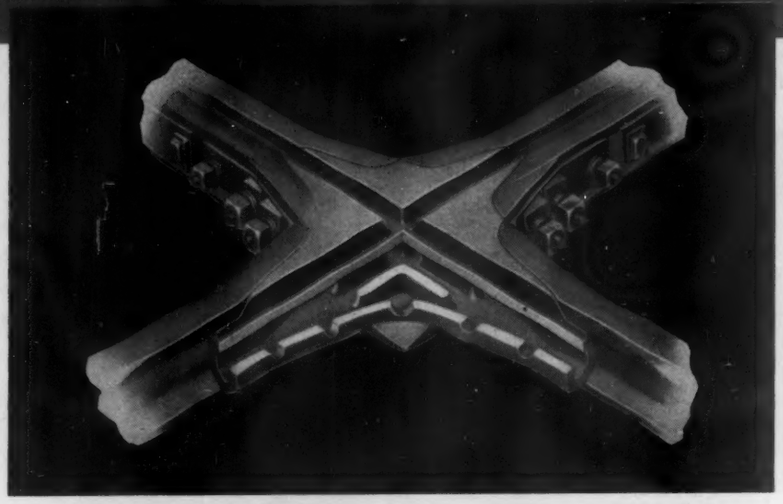

GRIND TO SHARP EDGE
1½" RAD.
SLOPED FROM WHERE TOP WIDTH OF MANGANESE STEEL IS 1"
SECTION X-X
LINE OF HEAVY TRAFFIC
DRAWN 75°
HEAVY TIMBERS OR SWITCH TIES BOLTED TOGETHER
CROSS HATCHING INDICATES DEPTH HARDENED AREAS MINIMUM BRINELL 350
WELD
SECTION A-A
SECTION B-B



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- MANGANESE STEEL GUARD RAILS

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109 North Wabash Avenue, Chicago 2, Ill.

LONG AND SHORT OF IT.—On May 1 the Southern Pacific ticket offices switched over to the new book-type ticket and consigned to the scrap heap some 348 local and interline ticket forms and countless rubber stamps, ticket punches, pasters and other paraphernalia traditional to ticket offices. Thirteen forms of the new book ticket now handle all sales except commutation. Here General Passenger Agent T. Louis Chess (left) holds one of the new forms while J. B. Haggerty holds one of the "accordion pleated" forms formerly used for transcontinental sales.

(Continued from page 178)

from the Zeigler Coal & Coke Co. under arrangements whereby the I.C. and M.P. would each be given a one-third interest, if they desired it. There are 5,000 shares of J.S. stock, and the proposed transactions contemplate that each of the three roads will have invested $28,333, the equivalent of $17 a share. The J.S. operates 13.7 miles of line in Jefferson County, Ill.

Lehigh Valley.—*Stock Option Plan.*—The I.C.C.'s Division 4 has approved this road's proposed stock option plan for officers and key employees. The commission authorized the L.V. to issue and sell 36,000 shares of common stock to these top employees. The plan is calculated to help the road attract and retain competent personnel—"to facilitate the continued growth and financial success of the road by affording to key managerial personnel an incentive to acquire a proprietary interest. . ." The plan, already approved by L.V. stockholders, will be administered by a committee of three appointed by the board of directors. (*Railway Age*, April 21, page 75).

Missouri Pacific.—*Reorganization.*—The debtor corporation has asked the I.C.C. to set aside its May 18, 1951, order wherein the commission certified to the district court the results of balloting on this road's reorganization plan. This certification showed that the plan was accepted by better than a two-thirds vote by 10 of the 17 eligible groups of creditors and stockholders. (*Railway Age*, May 28, 1951, page 72).

In a petition filed last week, the corporation levied charges against the way the commission handled the balloting. It said, among other things, that the commission's procedure permitted the crediting of "defective and invalid ballots"; that the staff of the commission "failed to accord equality of treatment to 'accept' and 'reject' voters"; that "accept" ballots were validated after the January 15, 1951, deadline; and that large arithmetical errors favoring the "accept" ballots were made in the certification to the court.

"The petitioner is prepared to prove at a public hearing, from the commission's own personnel and records, each and every allegation, including the statement that neither the commission, nor anyone else, can certify from the ballots and related papers (except as to a few minor classes) that two-thirds of the true owners voting securities of any class, in fact, voted to accept the plan of reorganization."

During the time the commission was tabulating the ballots, in the spring of 1951, the corporation made a similar request for an opportunity to challenge the vote of security holders on the commission-approved plan. That request was denied when the commission made its certification to the court. The M.P. reorganization plan in dispute was reviewed in *Railway Age* of August 20, 1949, page 67.

New York Connecting.—*Trackage Rights.*—Division 4 of the I.C.C. has approved a supplemental agreement under which this road will continue to use Long Island tracks between Freemont street in the borough of Queens, New York, and Bay Ridge in Brooklyn. The supplemental agreement will call for increased annual payments to the L. I.

New Securities

Application has been filed with the I.C.C. by:

SEABOARD AIR LINE.—To assume liability for $15,000,000 of series L equipment trust certificates to finance in part 400 covered hoppers, 25 caboose cars, and 124 diesel-electric locomotives. Estimated cost of the equipment, including depreciated cost of 95 of the locomotives already acquired, is $20,008,972. The 95 locomotives include 90 road-switching locomotives and five yard switching locomotives. They were delivered to the S.A.L. between November 19, 1950, and March 27, 1951.

The remaining 29 locomotives, the covered hoppers and caboose cars will cost an estimated $7,417,779. This equipment is as follows:

	Description and Builder	Estimated Unit Cost
400	70-ton covered hopper cement cars (Pullman-Standard Car Manufacturing Company)	$ 6,841
25	caboose cars (Company shops)	12,000
15	1,500-hp. road-switching locomotive units (Electro-Motive Division, General Motors Corporation)	153,000
5	1,600-hp. road-switching locomotive units (American Locomotive-General Electric Companies)	153,000
5	1,600-hp. road-switching locomotive units (Alco-G.E.)	163,000
4	1,200-hp. yard-switching locomotive units (Baldwin-Lima-Hamilton Corporation)	105,500

The certificates, dated June 1, would mature in 30 semiannual installments of $500,000 each, beginning December 1, 1952 They would be sold by competitive bidding, with interest rate to be set by such bids.

Security Price Average

	May 12	Prev. Week	Last Year
Average price of 20 representative railway stocks	59.62	59.99	55.99
Average price of 20 representative railway bonds	94.01	93.00	94.56

Dividends Declared

ALBANY & VERMONT.—$1, payable May 15 to holders of record May 1.

CATAWISSA.—5% 1st preferred, 75¢, semiannual; 5% 2nd preferred, 75¢, semiannual, both payable May 23 to holders of record May 9.

DELAWARE & BOUND BROOK.—50¢, quarterly, payable May 20 to holders of record May 13

NORTH PENNSYLVANIA.—$1, quarterly, payable May 25 to holders of record May 18.

PITTSBURGH & WEST VIRGINIA.—50¢, quarterly, payable June 16 to holders of record May 20.

PITTSBURGH, YOUNGSTOWN & ASHTABULA.—7% preferred, $1.75, quarterly, payable June 20 to holders of record May 20.

RAILWAY OFFICERS

EXECUTIVE

August Syverson, president of the LAKE SUPERIOR & ISHPEMING at Marquette, Mich., has been elected to the newly created position of chairman of the board. **J. H. Kline,** vice-president and general superintendent, has been elected president and general manager, succeeding Mr. Syverson. Mr. Kline's former position has been discontinued.

FINANCIAL, LEGAL & ACCOUNTING

Roy H. Booth, chief of the recheck bureau of the KANSAS CITY SOUTHERN at Kansas City, Kan., has been appointed auditor of revenues, succeeding **William G. Buechner,** who has retired. Mr. Booth began his railroad

William J. Quinn, assistant general counsel for the Minneapolis, St. Paul & Sault Ste. Marie, who has been appointed general counsel. A sketch of Mr. Quinn's career appeared in *Railway Age* of March 10.

TRADITIONAL B&O COMFORT...

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New Baltimore & Ohio coaches equipped with Heywood-Wakefield De Luxe Walkover Seats—an investment in low-maintenance passenger comfort.

This same relaxing Heywood-Wakefield unit has been installed by the Budd Company in their self-propelled RDC cars just put in service on these other blue-chip railroads—

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MANY OF America's forward-looking railroads depend upon Heywood-Wakefield in their planning for *passenger comfort* and *lowered maintenance costs*. Heywood-Wakefield's specific engineering know-how can heighten your railroad's competitive traffic picture and hammer down operating overhead. Passenger comfort at a lower-cost-per-year is our business.

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career in 1914 as a baggage clerk for the Atchison, Topeka & Sante Fe at Kingman, Kan. After a short period with the Union Pacific, he joined the K.C.S. in 1917 as a clerk in the local office at Kansas City. He became a clerk in the accounting department at Kansas City, and later chief clerk at Texarkana, Tex. He returned to Kansas City in 1934 when the Texas offices were consolidated with the system's general offices. He has been chief of the recheck bureau since 1946.

Mr. Buechner started his railroad career in 1898 in the engineering department of the Chicago, Rock Island & Pacific. After working for the Atchison, Topeka & Santa Fe and the Pennsylvania, he joined the K.C.S. in 1909. After rising from freight claim investigator to head of the department, he was appointed freight and passenger accountant in 1918. He was appointed auditor of revenues in 1924.

John T. Arnold, assistant auditor of freight accounts for the CHICAGO & NORTH WESTERN, has been appointed auditor of freight accounts. He is succeeded by **W. A. Weiss,** manager of the machine service bureau in the office of the assistant comptroller.

Mr. Arnold has been with the North Western since 1913, having previously worked for the Chicago, Burlington & Quincy and the Chicago, Milwaukee, St. Paul & Pacific. After serving in the Navy in World War I, he returned to the C. & N.W. and served successively as head clerk, assistant chief clerk and chief clerk to the auditor of freight accounts. In 1940 he was named chief clerk to the assistant comptroller and in 1941 was promoted to assistant auditor of freight accounts.

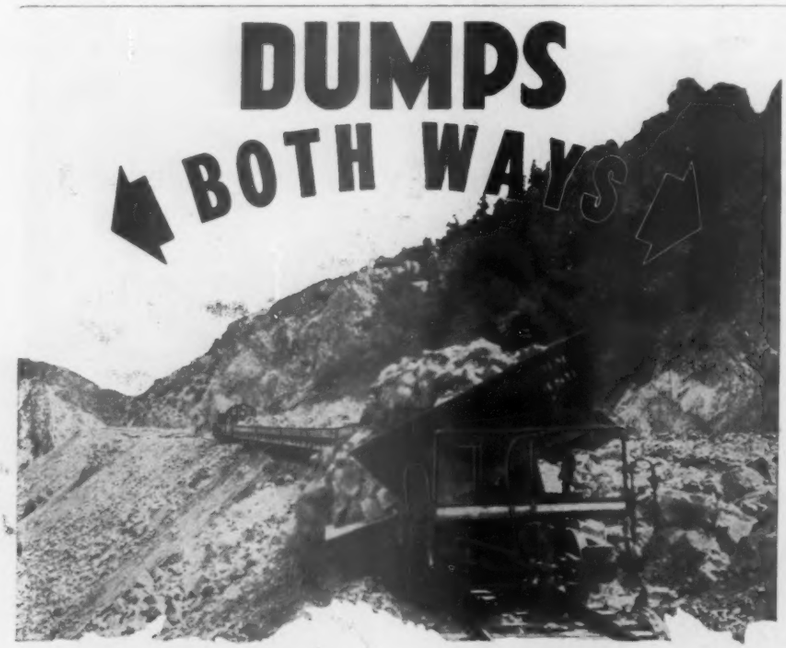
OPERATING

The ST. LOUIS-SAN FRANCISCO has announced removal of its Southern division headquarters from Memphis, Tenn., to Amory, Miss.

Ward H. Leahy, superintendent of the Cleveland division of the NEW YORK CENTRAL, has been appointed assistant to the assistant general manager, lines West district, with headquarters as before at Cleveland, succeeding **Roger W. Andrews,** who has retired after almost 46 years of service. **Arthur G. Teets,** assistant superintendent of the Cleveland division, has been named superintendent of that division. **F. K. Mitchell, Jr.,** assistant to assistant general manager of the Big Four district, has been appointed assistant superintendent of freight transportation of that district, with headquarters as before at Indianapolis, succeeding **Douglass Campbell,** who has been named assistant superintendent of the Cleveland division. **J. O. Phillips,** assistant trainmaster at Galion, Ohio, has been appointed trainmaster of the Illinois division at Terre Haute, Ind., succeeding **W. K. Dice,** who has been named assistant to assistant general manager at Indianapolis.

Arthur G. Teets

Mr. Teets was born at Chicago on November 4, 1900, and joined the Central as a clerk at New York in 1919. He was promoted to trainmaster at Columbus, Ohio, on April 1, 1936, and, aside from three years spent in military service, was trainmaster at Toledo, Ohio, from 1942 to 1948, when he was transferred to the general manager's office at Cleveland. Mr. Teets was appointed assistant superintendent at Van Wert, Ohio, in 1950, transferring to Jackson, Mich., later that year and to Cleveland on June 1, 1951.



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Experience of users of Differential cars indicates that the saving due to the automatic unloading of 400 to 500 car loads usually is sufficient to pay for the cars. For handling waste materials, ore, or for any of many other applications, Differential Air Dump cars can do a better job for you.

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Air Dump Cars • Car Dumpers • Locomotives • Lorries
Mine Cars • Complete Haulage Systems • Mantrip Cars

DIFFERENTIAL STEEL CAR COMPANY
FINDLAY, OHIO
Since 1915 - Pioneers in Haulage Equipment

C. I. Warren, assistant superintendent of the London division of the CANADIAN NATIONAL, has been appointed superintendent of that division, with headquarters as before at London, Ont., succeeding **J. A. Murphy,** who has retired on pension after many years of service.

E. L. Amrein has been appointed car accountant of the MARYLAND & PENNSYLVANIA at Baltimore.

J. C. Mixon, superintendent of transportation of the Northern division of the ATLANTIC COAST LINE, has been appointed assistant general superintendent of that division, with headquarters as before at Savannah, Ga. **H. H. Hill,** superintendent of the Richmond district at Rocky Mount, N. C., succeeds Mr. Mixon as superintendent transportation of the Northern division. **M. L. Horton,** general roadmaster at Florence, S. C., has been promoted to superintendent of the Richmond district.

L. A. Davis has been appointed supervisor freight claim prevention of the ATCHISON, TOPEKA & SANTA FE at Topeka, Kan., to succeed **R. C. Linsenmayer.**

John P. Foster, general manager of the Railway Express Agency at St. Louis, has been transferred in the same capacity to Los Angeles, succeeding **L. P. Bergman,** retired.

TRAFFIC

George E. Clodfelter, Jr., has been appointed general agent of the RUTLAND at Chicago.

Archibald McClay, traveling freight agent of the DELAWARE, LACKAWANNA & WESTERN at Chicago, has been appointed general agent at Indianapolis, succeeding **Samuel J. Neill,** who has joined the sales staff of the assistant general freight agent at New York.

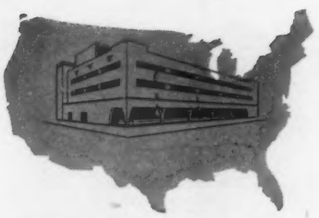
A. W. Kelly, district freight agent of the CANADIAN PACIFIC at St. Louis, has been transferred to Pittsburgh, succeeding **T. M. Holland,** who has been appointed general freight agent at New York.

H. W. Landman, special representative for the MISSOURI-KANSAS-TEXAS at Fort Worth, Tex., has retired after 55 years of service.

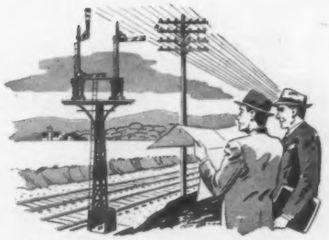
Eugene B. Spence has been appointed general industrial agent for the SOUTHERN at Birmingham, Ala.

John H. Grieme, division freight agent of the SOUTHERN SYSTEM, has been promoted to assistant general freight agent, with headquarters remaining at Mobile, Ala.

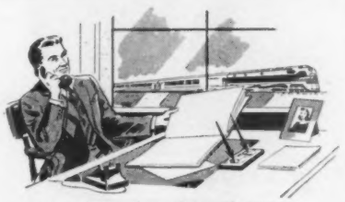
Lindsay O. Holt, district freight agent of the PENNSYLVANIA at Dayton, Ohio, has been transferred to Trenton, N. J., succeeding **Charles A. Fritzson,** who has been appointed division freight agent at Grand Rapids, Mich.



1. A nation-wide warehouse system



2. Help from Railroad Specialists



3. Local Graybar Representatives

4. Catalog and quotation service

How Graybar speeds your procurement of electrical supplies

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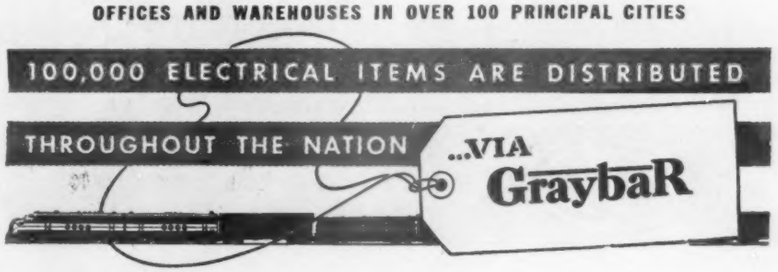

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LORD BONDED RUBBER

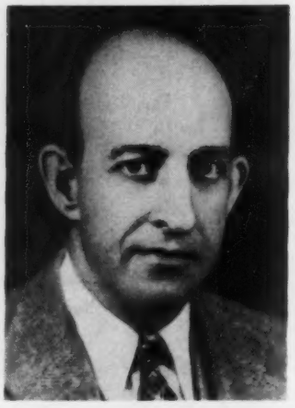
HEADQUARTERS FOR
VIBRATION CONTROL MOUNTINGS
. . . BONDED RUBBER PARTS

Harvey M. Johnson, Jr., district freight agent at Scranton, Pa., succeeds Mr. Holt at Dayton.

A. M. Cheatham has been appointed general agent of the ELGIN, JOLIET & EASTERN at Seattle, Wash.

Ross A. Norris, assistant freight traffic manager, rates, of the GRAND TRUNK WESTERN and the CANADIAN NATIONAL at Chicago, has been appointed freight traffic manager, rates, suceeding **L. A. Veroneau,** who has retired. **J. M. Frank,** general freight agent, rates, succeeds Mr. Norris. **A. J. Medrow,** assistant general freight agent, rates, succeeds Mr. Frank, and is succeeded by **Michael Parr,** chief of the tariff bureau.

Mr. Norris began his railroad career in 1919 as a stenographer in the tariff bureau at Montreal, and came to Chicago in 1926 as percentage clerk in the freight tariff bureau. He was appointed chief of the bureau in 1943 and assistant general freight agent later the same year. Since 1951 he has been assistant freight traffic manager, rates.



Ross A. Norris

Mr. Frank started his railway service as a messenger in the Chicago office in 1922 and progressed through various positions to become chief clerk in the freight traffic manager's office in 1947. A few months later he was appointed general agent, and served in that capacity at several points. In 1951 he was appointed assistant to the freight traffic manager at Chicago, and, later, general freight agent, rates.

Mr. Medrow's railway career began 32 years ago in Chicago as an office boy. He advanced to chief of the tariff bureau in 1943 and since 1950 has been assistant general freight agent.

W. Seal Burwell, commercial agent of the SOUTHERN at St. Louis, has been appointed district freight and passenger agent at Minneapolis, succeeding the late **Charles Kluiber.**

J. M. Peters, division freight and passenger agent of the CHICAGO & NORTH WESTERN at Des Moines, Iowa, has been promoted to traffic manager at Omaha. **Gale B. Grimes,** district

traffic representative at Los Angeles, was named general agent there, succeeding **N. D. Browne,** who has retired. **G. A. Langworthy,** traffic manager at Omaha, has been appointed general southwestern agent, a newly created position, with headquarters at Tucson, Ariz. Mr. Peters started with the North Western as a station helper at Niobrara, Neb., in 1918. He served as relief telegrapher, telegrapher, joint supervisory agent, city agent and traveling agent before being appointed general agent in 1937. In 1939 he became division freight and passenger agent at Omaha, and in 1942 was named industrial agent at Chicago. He became division freight and passenger agent at Des Moines in 1947.

Mr. Langworthy first came to the North Western as a clerk at Boone, Iowa, in 1916. He served successively as signal helper, towerman, agent, chief clerk, traveling agent and division freight and passenger agent. He was named traffic manager in 1947.

MECHANICAL

With the removal of Southern division headquarters of the ST. LOUIS-SAN FRANCISCO from Memphis, Tenn., to Amory, Miss., the office of master mechanic was transferred to Amory but that of the general car foreman remained at Memphis.

O. B. Capps has been promoted to general mechanical inspector of the BALTIMORE & OHIO at Baltimore, succeeding **W. H. Tapman,** deceased. **Kenneth K. Kessler** has been appointed engineer of physical tests.

E. J. Cooke, superintendent Transcona, car shop, CANADIAN NATIONAL, has been appointed assistant general superintendent car equipment of the Central region at Toronto, succeeding **W. G. Palmer,** who has retired after many years of service.

PURCHASES & STORES

J. A. Bawsel, division storekeeper of the Chesapeake district of the CHESAPEAKE & OHIO at Peru, Ind., has been transferred to Russell, Ky., succeeding **C. S. Wetherholt,** promoted.

O. C. Fowble, storekeeper of the CHESAPEAKE & OHIO at Toledo Docks, Toledo, Ohio, has been promoted to division storekeeper, Chesapeake district, at Peru, Ind., succeeding **J. A. Bawsel.**

R. R. Kane, assistant general storekeeper for the LOUISVILLE & NASHVILLE, has been appointed general storekeeper at South Louisville, Ky., succeeding **C. H. Murrin,** retired. Mr. Kane began his railroad career with the Chicago, Rock Island & Pacific, later joining the Western Maryland and the Illinois Central before coming to the L. & N. in 1931 as division storekeeper. He was appointed assistant general storekeeper in 1941.

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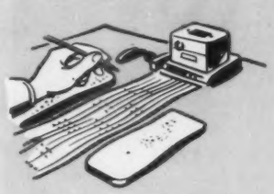

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FROST WOLMANIZED PINE

Mr. Murrin joined the L. & N. in 1931 and has served as general storekeeper since that time. Prior to that he had been with the Rock Island, the Chicago & Eastern Illinois, and the I.C., serving in their stores departments in several capacities.

W. E. Bird has been appointed acting district storekeeper of the CHICAGO, BURLINGTON & QUINCY at Lincoln, Neb., succeeding **J. J. Jirousek,** who has been appointed acting district storekeeper at Havelok, Neb. Mr. Jirousek succeeds **J. K. McCann,** temporarily assigned to other duties.

ENGINEERING AND SIGNALING

The CHICAGO & NORTH WESTERN has announced the following engineering department appointments, as reported by *Railway Age* on April 7: **B. R. Meyers,** assistant chief engineer, as chief engineer, succeeding **E. C. Vandenburgh,** retired; **L. R. Lamport,** engineer of maintenance, as chief engineer of maintenance, succeeded by **P. V. Thelander,** assistant engineer of maintenance; and **W. H. Huffman,** Wisconsin division engineer, as assistant to chief engineer, succeeding **H. W. Jensen,** appointed assistant engineer of maintenance.

A graduate civil engineer from Iowa State College in 1925, Mr. Meyers joined the Chicago, Rock Island & Pacific at that time and served two and one-half years on various engineering projects in Chicago, Oklahoma and

B. R. Meyers

Kansas. In 1929 he went to the North Western as an instrumentman, subsequently becoming assistant general bridge inspector and assistant engineer. In 1939 he became assistant trainmaster and later trainmaster at several points. In 1945 he returned to the engineering department as office engineer and assistant to chief engineer in Chicago, and in 1948 was promoted to assistant chief engineer.

After graduation from Iowa State in engineering in 1908, Mr. Vandenburgh joined the North Western as a tape-

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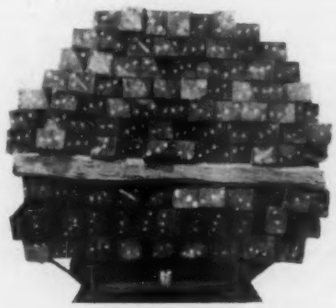

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man, subsequently working on several construction and maintenance projects. In 1912 he became signal inspector in Chicago, where, by 1914 he had risen to chief draftsman. At that time he was appointed assistant engineer on railway and signal construction, four years later becoming assistant general bridge inspector. In 1924 he was named supervisor of bridges and buildings, and in 1931 he became division engineer. He

E. C. Vandenburgh

was promoted to engineer of maintenance in 1940 and in 1946 was named chief engineer.

Mr. Lamport became associated with the North Western during school vacations before receiving his civil engineering degree in 1923 from the University of Illinois. He served as tapeman, rodman and instrumentman. In 1925 he joined the Illinois Central, where he served as rodman until 1927, when he returned to the North Western as construction accountant. Since that time he has served as assistant engineer, supervisor of work equipment, division

L. R. Lamport

engineer and assistant to chief engineer, being promoted in 1946 to engineer of maintenance for the system.

Mr. Thelander received his engineering education at Armour Institute of Technology and the University of Illinois. His railroad experience started in

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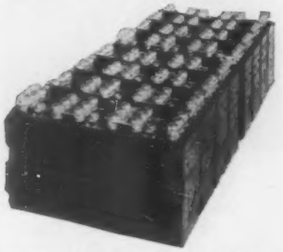
2 models—THR-30, THR-44



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THR 44	210	48	44¼"	11"	2073

THR-30—Interchangeable with 17-plate, 248 A.H. Lead Acid Batteries
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1911 as a rodman with the Mt. Hood and the Petaluma & Santa Rosa. He went to the C.&N.W. in 1913 as rodman and in subsequent years served as instrumentman for that road, the Milwaukee and the Nickel Plate. After

P. V. Thelander

serving in the army during World War I, he returned to the North Western in 1919. After serving as instrumentman and computer, assistant engineer and division engineer, he was promoted in 1947 to assistant engineer of maintenance.

Mr. Huffman, who received his bachelor's and master's degrees in civil engineering at Purdue, joined the North Western in 1929 for summer work while attending the university, serving as rodman in Wisconsin. After graduation he became rodman, and then, successively, instrumentman, engineer accountant, assistant engineer and division engineer.

Mr. Jensen, a graduate engineer of the University of Wisconsin, entered North Western service in 1925 as rodman, serving successively as inspector, instrumentman, assistant general bridge inspector, assistant construction accountant, assistant roadmaster, assistant engineer and division engineer. He served with the armed forces for two years during World War II; returned to the C.&N.W. in 1946 as office engineer, and later became division engineer. He was promoted to assistant to chief engineer in 1948.

The ST. LOUIS-SAN FRANCISCO has announced removal of Southern division headquarters from Memphis, Tenn., to Amory, Miss. The office of division engineer and of the general foreman, bridges, buildings and water service, were included in the move.

C. M. Wallace, assistant superintendent, telegraph and signals of the eastern region of the PENNSYLVANIA, has been appointed superintendent, telegraph and signals, western region, with headquarters at Chicago. He succeeds **R. F. Raughley,** who will retire. **J. A. Balla,** supervisor, telegraph and signals, of the Maryland division has been named engineer, telegraph and signals, of the western region, succeeding **W. G. Trost. J. I. Adams,** junior engineer, telegraph and signals, of the Philadelphia terminal division, has been appointed assistant supervisor, telegraph and signals, of the Chicago division, succeeding **T. S. Calhoun. W. W. McMichael,** assistant supervisor, telegraph and signals, of the Maryland division, has been appointed supervisor, telegraph and signals, of the Cincinnati division, succeeding **L. W. Hayhurst. F. D. Banks,** junior engineer, telegraph and signals, of the Maryland division, has been appointed assistant supervisor, telegraph and signals, of the southwestern division at Indianapolis, Ind., succeeding **J. G. Cunningham.**

SPECIAL

E. C. MacPherson, public relations officer for Canadian Pacific Airlines, has been named public relations officer of the Pacific region of the CANADIAN PACIFIC, with headquarters as before at Vancouver, B.C. He succeeds **J. F. Magor,** who will become publisher of the Prince Rupert, B.C., Daily News.

Jean E. Belanger, chief inspector of the Quebec district of the CANADIAN PACIFIC, has been appointed assistant chief of the investigation department at Montreal, succeeding **Stanley H. Spry,** who has retired on pension after almost 40 years of service.

George R. Huntoon, superintenddent of safety for the CHICAGO, ROCK ISLAND & PACIFIC at Chicago, has been appointed superintendent of safety and operating rules

OBITUARY

William Mathew Punter, 76, who retired in December 1939 as signal engineer of the CANADIAN NATIONAL at Montreal, died on May 7.

Bernard Herman, 76, who retired in February 1946 as chief engineer of the SOUTHERN SYSTEM, died on May 2 at his home in Washington, D.C.

W. H. Tapman, general mechanical inspector of the BALTIMORE & OHIO at Baltimore, died on April 20, after 50 years of service with the B.& O.

Theo Davis, traffic manager of the MIDDLE FORK and manager of the Lumber Traffic Association, died on April 10, in Cincinnati. During World War I he had been in charge of inland traffic service for the war department. He served as assistant director of the division of railway transportation, Office of Defense Transportation, during World War II. He had been manager of the Lumber Traffic Association since 1921 and traffic manager of the Middle Fork since 1929.

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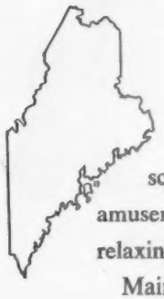

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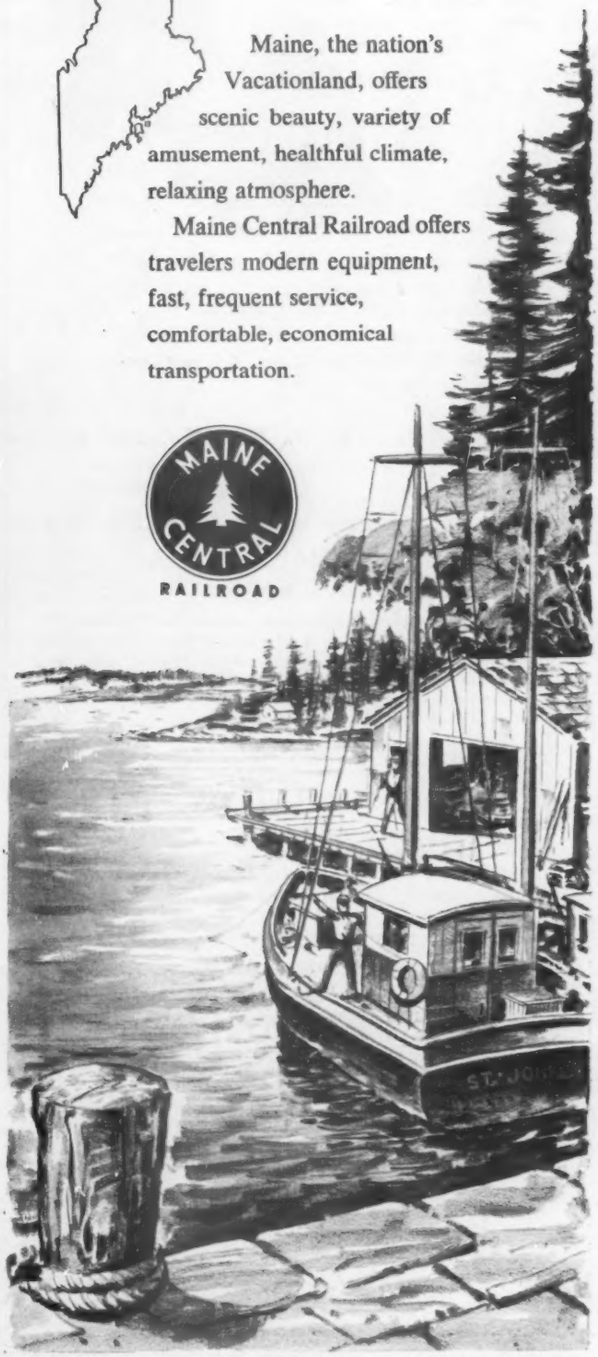

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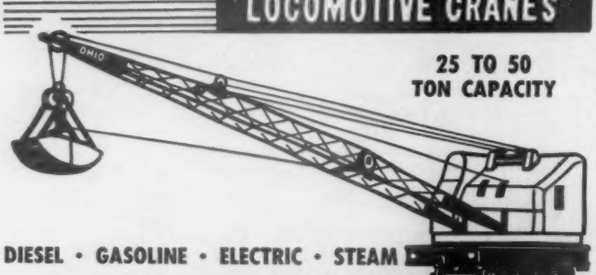

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Gondolas, All-Steel, 55-Ton, Solid Bottom
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Hoppers, Twin, All-Steel, 50-Ton, Cross Dump
Hoppers, All-Steel, 70-Ton, Cross Dump
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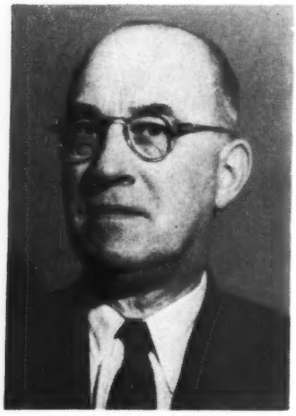
1911 as a rodman with the Mt. Hood and the Petaluma & Santa Rosa. He went to the C.&N.W. in 1913 as rodman and in subsequent years served as instrumentman for that road, the Milwaukee and the Nickel Plate. After



P. V. Thelander

serving in the army during World War I, he returned to the North Western in 1919. After serving as instrumentman and computer, assistant engineer and division engineer, he was promoted in 1947 to assistant engineer of maintenance.

Mr. Huffman, who received his bachelor's and master's degrees in civil engineering at Purdue, joined the North Western in 1929 for summer work while attending the university, serving as rodman in Wisconsin. After graduation he became rodman, and then, successively, instrumentman, engineer accountant, assistant engineer and division engineer.

Mr. Jensen, a graduate engineer of the University of Wisconsin, entered North Western service in 1925 as rodman, serving successively as inspector, instrumentman, assistant general bridge inspector, assistant construction accountant, assistant roadmaster, assistant engineer and division engineer. He served with the armed forces for two years during World War II; returned to the C.&N.W. in 1946 as office engineer, and later became division engineer. He was promoted to assistant to chief engineer in 1948.

The ST. LOUIS-SAN FRANCISCO has announced removal of Southern division headquarters from Memphis, Tenn., to Amory, Miss. The office of division engineer and of the general foreman, bridges, buildings and water service, were included in the move.

C. M. Wallace, assistant superintendent, telegraph and signals of the eastern region of the PENNSYLVANIA, has been appointed superintendent, telegraph and signals, western region, with headquarters at Chicago. He succeeds **R. F. Raughley,** who will retire. **J. A. Balla,** supervisor, telegraph and signals, of the Maryland division has been named engineer, telegraph and signals, of the western region, succeeding **W. G. Trost. J. I. Adams,** junior engineer, telegraph and signals, of the Philadelphia terminal division, has been appointed assistant supervisor, telegraph and signals, of the Chicago division, succeeding **T. S. Calhoun. W. W. McMichael,** assistant supervisor, telegraph and signals, of the Maryland division, has been appointed supervisor, telegraph and signals, of the Cincinnati division, succeeding **L. W. Hayhurst. F. D. Banks,** junior engineer, telegraph and signals, of the Maryland division, has been appointed assistant supervisor, telegraph and signals, of the southwestern division at Indianapolis, Ind., succeeding **J. G. Cunningham.**

SPECIAL

E. C. MacPherson, public relations officer for Canadian Pacific Airlines, has been named public relations officer of the Pacific region of the CANADIAN PACIFIC, with headquarters as before at Vancouver, B.C. He succeeds **J. F. Magor,** who will become publisher of the Prince Rupert, B.C., Daily News.

Jean E. Belanger, chief inspector of the Quebec district of the CANADIAN PACIFIC, has been appointed assistant chief of the investigation department at Montreal, succeeding **Stanley H. Spry,** who has retired on pension after almost 40 years of service.

George R. Huntoon, superintendent of safety for the CHICAGO, ROCK ISLAND & PACIFIC at Chicago, has been appointed superintendent of safety and operating rules

OBITUARY

William Mathew Punter, 76, who retired in December 1939 as signal engineer of the CANADIAN NATIONAL at Montreal, died on May 7.

Bernard Herman, 76, who retired in February 1946 as chief engineer of the SOUTHERN SYSTEM, died on May 2 at his home in Washington, D.C.

W. H. Tapman, general mechanical inspector of the BALTIMORE & OHIO at Baltimore, died on April 20, after 50 years of service with the B.& O.

Theo Davis, traffic manager of the MIDDLE FORK and manager of the Lumber Traffic Association, died on April 10, in Cincinnati. During World War I he had been in charge of inland traffic service for the war department. He served as assistant director of the division of railway transportation, Office of Defense Transportation, during World War II. He had been manager of the Lumber Traffic Association since 1921 and traffic manager of the Middle Fork since 1929.

Complete loudspeaker paging and two-way communicating systems for classification yards, terminal facilities, mail and baggage handling facilities, passenger stations, freight stations, engine houses, interlocking towers, car checking service, and for Dispatcher's and other low level telephone type line applications.

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  - Paging systems
- Portable sound systems
  - Pre-amplifiers
  - Power amplifiers
  - Way station amplifiers
  - Dispatcher's transmitter and receiver units
- Telephone line concentration units
  - Telephone line monitoring units
  - Remotely controlled systems
  - Automatic volume level compensating units
  - Time and emergency signal devices
- Microphones
  - Loudspeakers
  - Weatherproof control units
  - Switch and jack box assemblies
  - Equipment cabinets
- Power supply units
  - Relays — switches — transformers
  - Speech frequency band-pass filters
  - Wire — Cable
  - Control equipment for special applications
  - Portable tape recorders

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